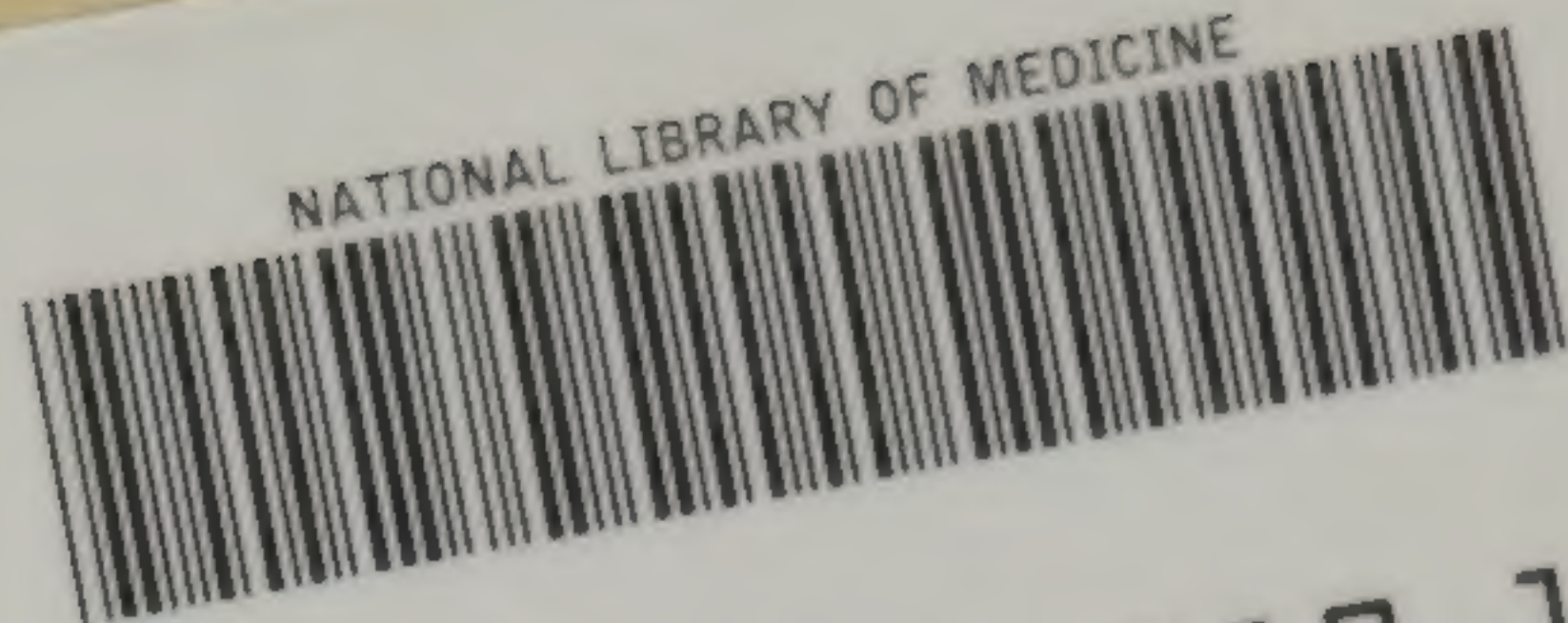


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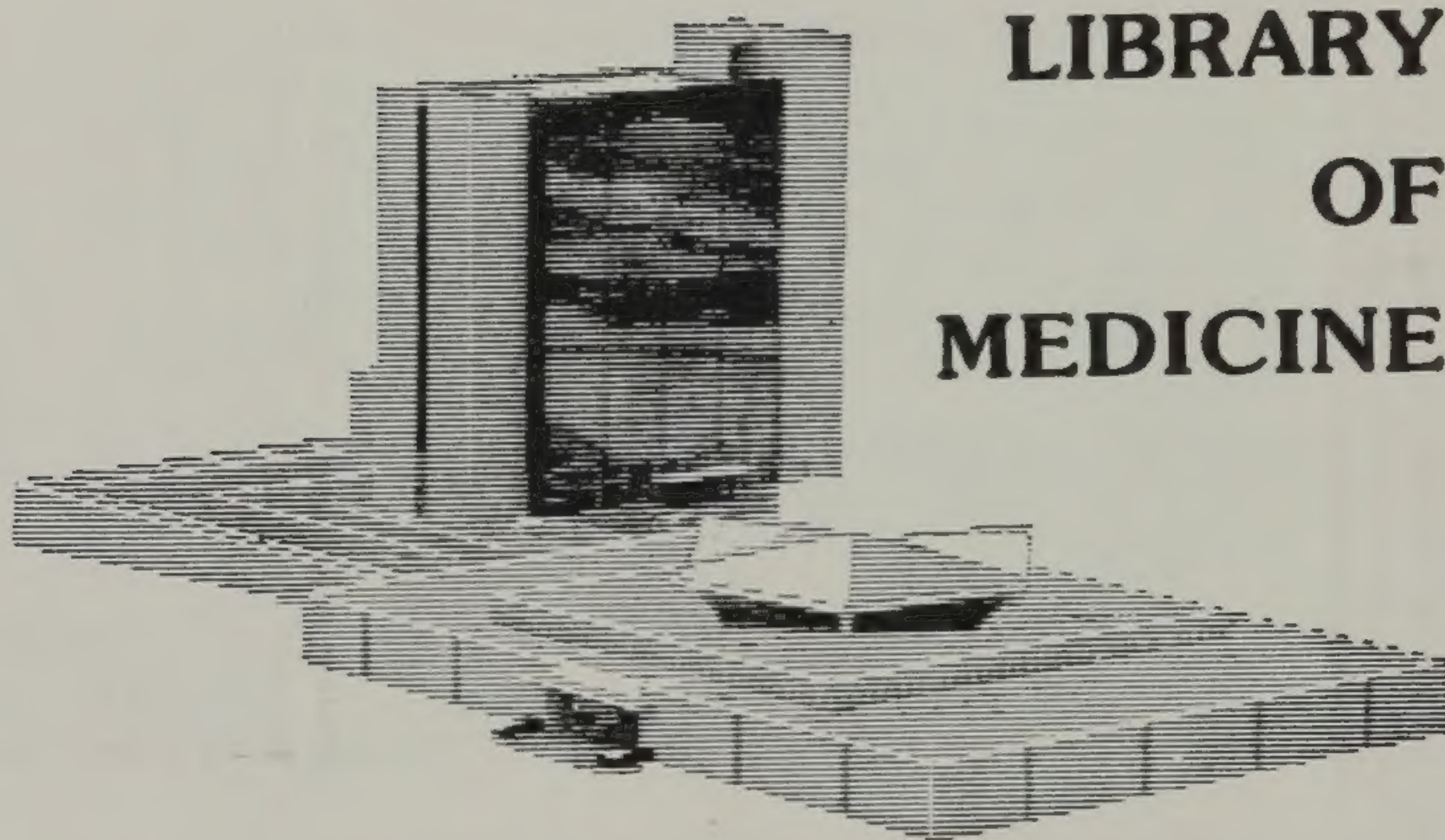


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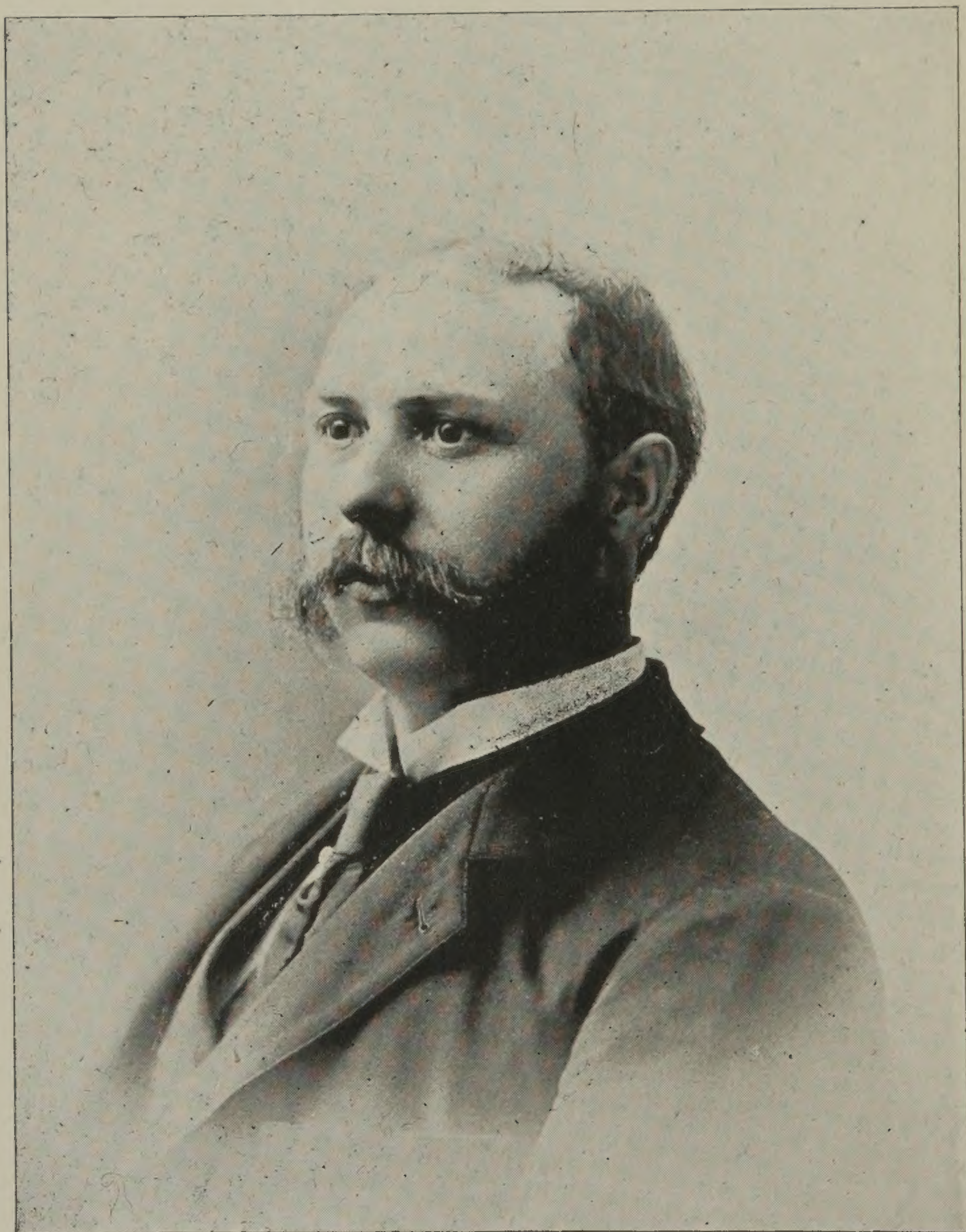
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D. E. BARNES, M. D.



# THE LAWS AND MYSTERIES OF LIFE

## A HAND BOOK

For Maidens, Mothers, Students and Practitioners of Medicine

A Treatise on Love, Beauty, Health, Diseases of Maidenhood,  
Womanhood, and the Physiology of the Marriage  
State, Gynecology and Obstetrics

## THE WAY TO EASY MATERNITY

The Care of Mothers During Parturition, the Care of Infants  
and Children

—BY—

DAWSON E. BARNES, M. D.

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## PREFACE.

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**T**HE author in presenting this volume to the reading public, begs no apology and asks for no recommendation. He claims no originality of thought, but leaves the volume to speak for itself concerning the manner of presentation of old and new treasures.

Having been solicited, repeatedly, by patients and friends in the Central and Middle States to write a book for the instruction and guidance of women, and finding but few published that gave the necessary information, the author decided to write a book which would set forth the facts and meet the demands of an inquiring public. The writer can not give credit to any particular author, but acknowledges having gleaned the best from all. He has endeavored to present the facts of the science of the life of women in an intelligent and attractive way, avoiding all superfluous argument, and, as much as possible, omitting technical terms. A glossary has been appended in order to acquaint the reader with the necessary terms used.

The reader will find that this book is not by any means a "novel," but a book of "facts," treated in a scientific and common-sense manner, for the purpose of giving knowledge and pleasure to those who seek.



**T**O those patients and friends who have solicited my professional knowledge, to physicians and mothers, to all honest seekers of relief, and the betterment of the human race, I respectfully dedicate this work.



## GLOSSARY.

- ABDOMINAL. Belonging to the abdomen or belly.  
ABNORMAL. Unhealthy. Unnatural. Irregular.  
ABORTINES. Medicines causing abortion.  
ABSCESS. An accumulation of pus.  
ACONITE. Aconitum Napellus. Monk's-hood.  
ACCOUCHEUR. Surgeon in child-birth. Midwife.  
ACITUM. Vinegar.  
ADIPOSE. Fatty.  
ADJUVANT. Aid.  
ALTERATIVE. A mild cathartic. Remedies capable of promoting re-construction.  
AMAUROSIS. Paralysis of optic nerve. Blindness.  
AMENORRHEA. Suppression of the menses.  
AMMONIA. Hartshorn. Sal Ammoniac.  
AMNION. The internal membrane of the ovium containing the waters and foetus in utero.  
AMNIOTIC. Pertaining to amnion.  
ANCHYLOSIS. Ossified joint. Bony joint.  
ANEMIA. An impoverished state of blood. White blood.  
ANODYNE. Soothing pain.  
ANTERIOR. Front.  
ANTEVERSION. Bending forward of uterus.  
ANTIPERIODIC. A remedy for intermittent fever.  
ANTIPHLOGISTIC. Counteracting inflammation.  
ANTISEPTIC. Preventing or retarding putrefaction.  
ANUS. Circular opening outlet of the bowels.  
AORTA. The great artery coming from the heart.  
APERIENT. Laxative. Mild cathartic.  
APHRODISIAC. To excite sexual desire, or to increase the generative power.  
APHTHA. Thrush. Infant's sore mouth.  
APIS MELLIFICA. Honey bee. Poison.  
ARNICA MONTANA. Leppard's bane.  
ARSENICUM ALBUM. White arsenic.  
ASTRINGENT. Binding. Contracting.



- ATROPHY. Decrease in size.
- AURICLE. Upper chambers of the heart.
- AUSCULTATION. Act of listening to sounds in any part of the body.
- AXILLA. Arm pit.
- BACTERIA. Microscopical insects.
- BELLADONNA. Deadly night shade.
- BENZOIN. Balsamic resin from styrax benzoin.
- BRONCHORRHEA. Increased discharge of mucus from the bronchia.
- BRYONIA ALBA. White bryony.
- CALCAREA CARBONICA. Carbonate of lime.
- CALENDULINE. Mixture of calendula and cosmoline.
- CANTHARIS. Spanish fly.
- CAPILLARIES. Hair like vessels for conveying the blood from the arteries to the veins.
- CAPSULES. Small membranous sacks.
- CARDIAC. Belonging to the heart.
- CATAMENIA. Change of life.
- CATARRH. A discharge from mucous surfaces of the body.
- CATHARTIC. A drug that increases the action of the bowels.
- CAUL OMENTUM. The membrane which, not being ruptured, covers the child's head and face at birth.
- CELLULAR. Composed of cells.
- CELLULITIS. Inflammation of the cellular tissues.
- CERVIX. Neck.
- CERVIX UTERI. Neck of the womb.
- CHAMMOMILLA MATERICARIA. Wild matricary. Chamomile.
- CHORDEE. A painful erection of the penis.
- CHORIAN. The external membrane enveloping the foetus.
- CIMICIFUGA RACEMOSA. Macrotis. Black cohosh. Black snake root.
- CLAVICLE. Collar bone.
- CRYSTER. An injection of flocid per rectum.
- CLIMACTERIC. A critical period.
- CLAP. Gonorrhœa.
- COCCYX. Terminal bone of the spine.
- COHOSH. Black snake root. Squaw root.
- COLOCYNTHIS. Bitter cucumber.
- CONCEPTION. The act of generation on the part of the female.



- CONGESTION. Over-fullness of blood vessels.
- CONTUSION. Abruise.
- CRURAL. Belonging to the leg.
- CYSTIC. Inflammation of the bladder.
- DEFECATION. The act of voiding excrement or feces.
- DECIDUA. Menstrual membrane. Cast off at every menstruation.
- DEPURITION. Removal of impurities.
- DESQUIMATION. Shedding off.
- DIAGNOSIS. Scientific determination of disease.
- DIAPHRAM. Breathing muscle between chest and abdomen.
- DIAPHORETIC. A remedy that produces perspiration.
- DILUENT. A substance that dilutes or thins liquid.
- DIPHTHERIA. A malignant membranous disease of the throat.
- DIPHTHERETIC. Pertaining to diphtheria.
- DIURETIC. Causing increased discharge of urine.
- DUODENUM. The first part of the small intestines.
- DYSTOCIA. Deformities of pelvis, causing difficult and surgical delivery.
- ECLAT. Brilliant reputation. Distinction. Prestige.
- EMBRYO. Child before birth.
- EMMENAGOGUE. Remedy that causes uterine contractions.  
Promotes the menstrual discharge.
- EMESIS. Vomiting.
- EMULSIFY. Soften. Make milky.
- ENCIENTE. Pregnant.
- ENEMA. Injection.
- ENEURESIS. Involuntary discharge of urine.
- ENTERITIS. Inflammation of the intestines.
- EPIDERMIS. Outer skin.
- ERGOT. Smut of rye. A poisonous fungus growth.
- ETIOLOGY. The science of the cause of disease.
- EUSTACHIAN VALVE. A valve of the heart.
- EXCORIATION. A chafing or abrasion of the skin.
- EXCRETION. Anything thrown off from the system.
- EXCRETORY. Throwing off matter.
- EXHALATION. Vapor thrown off.
- EXOSMOSIS. Passage of liquids through membranes outward.
- FALLOPIAN TUBES. Tubes from ovaries to uterus. Oviducts.
- FAUCES. The upper part of the throat.
- FECES. Discharge from the bowels. Excrement.



- FECUNDATION. The act of impregnation. Fertilization.
- FŒTAL. Pertaining to fetus or child in womb.
- FŒTUS. Child in womb after the fifth month.
- FIMBRIATED. Fringed, or finger-like.
- FLATULENCE. Gases in the stomach or bowels.
- FLEX. Bend.
- FOMENTATION. Warm or hot applications to the body.
- FORAMEN OVALE. Opening between the auricles of the fœtal heart.
- FRIABLE. Easily crumbled or broken.
- FUNCTION. The office or duty of any organ.
- FUNDUS. Body.
- FUNUS UMBILICA. Umbilical chord.
- GANGLIA. Nerve centers.
- GANGLIONIC. Pertaining to ganglia.
- GANGRENE. First stage of mortification.
- GASTRITIS. Inflammation of the stomach.
- GELSEMIUM SEMPERVIRENS. Yellow jessamine.
- GESTATION. State of pregnancy. Period of growth of child in the womb.
- GLAUCOMA. Disease of the optic nerve of the eye.
- GLAIRY. Like the white of an egg.
- GLAND. A small body for the purpose of secretion or excretion. Kidneys, breast, etc.
- GRAVID. [*From gravis.*] Heavy. A term applied to the uterus during gestation.
- GREEN SICKNESS. Chlorosis. Anæmia.
- GUSTATORY. Pertaining to taste.
- GYNECOLOGIST. One who makes a specialty of gynecology.
- GYNECOLOGY. The science which treats of female organs.
- HAMAMELIS VIRGINICA. Witch hazel.
- HEREDITY. Transmitted from parent to child.
- HEMORRHOIDS. Piles. Tumors of the anus.
- HERPES. Tetter.
- HYDRASTIS. Golden seal. Yellow root.
- HYGIENE. The art of preserving health.
- HYPO. Hysterics.
- HYPEREMIA. Excess of blood in any part.
- HYPERTROPHY. Increase in size.
- IGNATIA AMARE. St. Ignatius' bean.
- IMPACTION. Hardened and packed closely.



- IMPREGNATION. The act of generation on the part of the male.
- IMPOTENCE. Incapable of pro-creating. Unable to have sexual intercourse.
- INDURATION. Hardening.
- INFUSORIA. Microscopic insects.
- INSEMINATION. Act of impregnating.
- INSOMNIA. Sleeplessness.
- INTEGUMENT. Skin.
- INTRA UTERINE. Within the uterus.
- INTROVERSION. Turned within.
- IPECACUANA. Ipecac.
- LABIA. The lips of the vagina.
- LATERAL. Side.
- LAXATIVE. Remedy increasing action of the bowels. Mild purgative.
- LEUCORRHŒA OR WHITES. A flow of mucus from the vagina and uterus.
- LIQUOR AMNII. Secretion in which the foetus floats.
- LOBELIA INFLATA. Indian tobacco.
- LOCIA. The flow which follows for some days after delivery.
- MALAISE. Discomfort. Indisposition.
- MAMMARY. Pertaining to the breasts.
- MASSAGE. Manipulation of the surface and muscles for remedial purposes.
- MATURATION. The formation of pus. The act of maturing.
- MECONIUM. First feces of an infant.
- MENOPÆUSE. Change of life.
- MENORRHAGIA. Profuse menstruation.
- MENSTRUATION. Monthly discharge of blood from the uterus.
- MERCURIUS CORROSIVUS. Corrosive sublimate.
- METRITIS. Inflammation of the womb.
- METRORRHAGIA. Hemorrhage of the womb.
- MISCIBLE. Capable of being mixed.
- MORBIFIC. Causing disease.
- MUCO-SANGUINEOUS. Composed of blood and mucus.
- MULTIPARA. Having had several children.
- NECROSIS. Dead bone.
- NAEVS. Mothers' marks.
- NUX VOMICA. Strychnois. Vomit nut.
- OBESITY. Fatness.



- OBSTETRICS. Midwifery.
- ODŒMATOUS. Puffy. Dropsical.
- ONANISM. Masturbation.
- OS-MOUTH. Used as mouth of womb.
- OSMOSIS. Transudation of fluids through membrane.
- OSSEOUS. Bony.
- OVA. Plural of eggs.
- OVARY. Almond-shaped body in which the eggs are developed.
- OVIDUCTS. Tubes which convey the ova from ovaries to uterus.
- OVUM. An egg.
- OXYGENATION. The process of combining with oxygen.
- PAPILLA. A pimple.
- PARIETES. Walls of a cavity.
- PARTURITION. Childbirth.
- PATHOLOGICAL. Morbid. Diseased.
- PERITONEAL. Pertaining to the peritoneum. Membrane which lines the interior of the body.
- PERINEUM. The floor of the pelvis, or space between and including the anus and vulva.
- PERISTALTIC. The peculiar worm-like movements of the intestines.
- PERITONEUM. A membrane lining the walls and organs of the abdomen.
- PERITONITIS. Inflammation of lining membrane of bowels.
- PELVIC. Pertaining to the lower part of the abdomen or pelvis.
- PELVIS. Basin. Large bone at base of trunk.
- PHYTOLACCA. Poke root.
- PILES. Hemorrhoids.
- PLACEBO. A remedy to gratify the patient.
- PLACENTA. The after-birth.
- PLACENTA PREVIA. Placenta presenting before child-birth.
- PLETHORIC. Full habit. Fleshy.
- PODOPHYLLUM. Mandrake. May apple root.
- PORTAL CIRCULATION. Venous circulation of blood from the digestive organs to the liver.
- POSTERIOR. Back.
- POST PARTUM. Subsequent to child-birth.
- PRIMAPARA. Woman who has been delivered of her first child.
- PRIAPISOM. A permanent erection of the male organs.
- PROGNOSIS. Prediction of the termination of a disease.
- PROLAPSUS. Falling. Protrusion.



- PROLAPSUS ANI. Protrusion of the rectum.
- PROLAPSUS UTERI. Falling of the womb.
- PROLIFICATION. Generation of offspring.
- PUBES. External part of the organs of generation covered with hair.
- PUBIC. Pertaining to the pubes.
- PUERPERAL. Belonging to or consequent upon child-birth.
- PULMONARY. Pertaining to the lungs.
- PULSATILLA NIGRICANS. Wind flower.
- PURULENT. Consisting of pus.
- PRURITUS. A skin trouble, characterized by intense itching.
- PYEMIA. Poisoned by absorption of pus.
- RADIAL. Belonging to the radius, one of the bones of the fore-arm.
- RECTUM. The last or lower portion of intestines.
- RENAL. Pertaining to the kidneys.
- RETROVERSION. Falling backward.
- RETROVERTED. Bent backward.
- RIGOR. Chilliness. Convulsive shuddering.
- SACRAL. Pertaining to the sacrum. The large, triangular bone near the end of the spinal column.
- SALINE. Salty, or containing salt.
- SALIVATION. Unnatural flow of saliva.
- SANATIVE. Health producing.
- SANGUINEOUS. Bloody.
- SANGUINARIA. Blood root.
- SANIOUS. Secretion tinged with blood.
- SCIATIC. Pertaining to the hip.
- SEBACEOUS. Secreting fatty matter. Cheesy substance.
- SEDATIVE. Quieting. Soothing.
- SEDULAR. Pertaining to seed.
- SEDULAR ABSORPTION. Absorption of the seed or semen.
- SEMEN. Secretion of the testes.
- SEPTIC. A substance that promotes putrefaction. Putrid.
- SEPTUM. Partition.
- SEPTICEMIA. Poisoning by putrid substances.
- SEROUS MEMBRANE. The lining of cavities which have no external opening.
- SETON. An opening in the flesh made and continued by drawing through a skein of silk or linen thread or horsehair.
- SIESTA. A mid-day nap.



SILICEA. Pure flint.

SITZ BATH. A bath in a sitting position.

SPHINCTER MUSCLE. Circular, contracting muscle.

SPERM. A seed. Fecundating principle. Seminal fluid.

SPUTA. Matter coughed up from the throat and lungs. Phlegm.

STRANGUAY. Discharge of urine with pain.

STERILITY. Barrenness. Impotence in male. Inability to contain in the female.

STERTORIOUS. Stertorous. Deep. Labored. Snoring.

STOMATITUS. Sore mouth.

STROMA. Connective tissue.

STRUMOUS. Scrofulous.

STYPTIC. An astringent. A substance that arrests hemorrhage.

SYNCHRONOUS. Happening at the same time.

TAMPON. A plug to arrest hemorrhage.

TENESMUS.

TERM. Full time of gestation.

TESTES. Glands which secrete the semen.

TESTICLE. Glands which secrete the semen.

THERAPIA. Therapeutics. Remedies.

THERAPEUTIC. The treatment of disease. Curative.

THORAX. Chest. Space encompassed by the ribs.

TISSUE. The peculiar structure of a part.

TOXOCOLOGICAL. Pertaining to poisons.

TRACHEA. Wind pipe.

TRANSUDATION. The coaxing of blood through a membrane.

TYMPANITIC. Distension of abdomen. Drum-like.

UMBILICAL. Pertaining to the naval.

UMBILICUS. The naval. The place in the abdomen from which the cord is removed.

URACHUS. A ligament that sustains the bladder.

URINARY. Pertaining to the urine.

UTERUS. Womb. The organ in which the foetus is developed.

VAGINA. Passage leading to the womb.

VARICOSE VEINS. Veins permanently dilated, with accumulation of dark-colored blood.

VASCULAR. Relating to the blood vessels.

VENA CAVA. The large vein communicating with the heart.

VENOUS. Pertaining to the veins.

VENTRICLE. The lower chambers of the heart.

VERATRUM ALBUM. White hellebore.



VERTIGO. Giddiness.

VERNIX CASEOSA. Unctuous material found on a new-born babe.

VESICLES. A small cavity in the human body. Bladder-like.

VIABLE. Capable of life.

VIABILITY. Capacity of living.

VILLI. Minute papillary elevations for absorption.

VISCERA. Organs within the cavity of the body.

VULVA. Outer lips of the vagina.

ZYMOTIC. Caused by fermentation. A zymotic disease is one caused by bacteria, or some morbid principle, acting like ferment.



## MIND.

Mind is the creator and originator of all things, both great and small. Without a good mind an individual is a blank and a charge upon the community and the state. With a perverted mind man can originate only poor and imperfect creations. When the mind is affected, the whole being is wrong ; every part is disjointed and disconnected. Upon the mind of an individual depends the success or failure of life. An imbecile can have only poor or imperfect success, but a strong and well balanced mind is a legacy far above price. Its possessor can enter upon any pursuit or undertaking in life with an assurance of perfect success. A perfect mind also influences the body for health, for a poor mind is apt to be supported by an unhealthy body. A quick and active mind causes its owner to possess a similar body ; whereas a sluggish mind is sure to be found in a sluggish, fat and unclean body. The mind wills that we move a foot, finger, eye or head, and it moves ; the mind commands that we feel no pain, and pain is almost absent. Then what is this great force that has so much to do with our lives and future ?

Mind is that spiritual substance which is associated with the body of a human being during the life in this world, and remains in existence after the death of an individual and forms the spirit or soul ; the individual is therefore supposed to live after death as a spirit, and remains in form like the human body which it occupied during life. It is upon this soul that the character of the individual depends, and it is this soul that guides us in every undertaking in life ; our every action depends upon what our soul prompts us to do. All individuals are good or bad, as directed by the soul.

The soul, while it inhabits a living body, is manifested through the thoughts, affections and desires, which we see when we meet our fellow beings and talk with them. It is this that tells us what is right and what is wrong, and it is also called conscience.

Animals possess something very similar to this. They have passions and feelings somewhat like mankind. The dog watches



every move of its master, and seems to know what the master wants to do. Thus we see instinct is closely related to the mind. Try the experiment of looking at your favorite dog, or at some animal you have never seen before ; wink at it and see the pleasant expression that will come into its eye. In walking along the street, wink at a horse and see how it will wink back. I tried this upon an animal which I thought was being abused by its master ; a wink from me and instantly it would wink back, and looked pleased at me while it looked angry at the driver whenever he attempted to abuse it. I have noticed animals in the slaughter pen waiting death. They knew what was coming, and when the time came, they fought for the life that was dear to them. Every man, woman and child has its presentiments of danger ; so do animals. Every one has at some time experienced a feeling of unrest or uneasiness even for days before some calamity befell him. I know a person who at a certain time had a feeling like this, which was impossible to shake off. This was caused by the death of a husband who was away from home. Two or three days afterward the news acquainting the wife of the death arrived, and the hour of his death corresponded with the time when she felt this uneasiness.

Two-thirds of the people of the whole world are Buddhists in religion. That is to say, they believe that the highest form of life is in that of God, a Supreme Being ; lives a limited time, then dies. The spirit then passes into the lowest form of living existence, which again lives and again dies, assuming the next highest form of life, to again die and again take on a form of life still higher. If this religion be correct, we would have the solution of the questions of instinct of the lower animals and soul in human beings. All Christians believe that it was a part of the divine essence which was breathed into Adam. All religion depends on the thought of a future state of existence. But the mind, what is it ? No one has yet been able to tell or to satisfactorily explain. Physiologists have attempted to explain it.

We will give two opinions of recognized authority. One (Fint) says the brain is not the organ of the mind, but the mind is produced by the brain substance, and is an intellectual force and can be produced only by the transmission of a certain amount of matter, and there can be no intelligence without brain substance. According to Hammond, the mind is a force, the result of nervous action, characterized by the ability to understand, per-



ceive and experience sensations, and act according to these impressions. Consciousness resides exclusively in the brain ; the other faculties are developed with more or less intensity in other parts of the nervous system.

Of these two opinions which will we adopt? Which is correct? We have no proof that either is correct, and, in the absence of proof, I will take the accepted theory that the soul exists after death, and that each individual being has a mind that is the result of the action of the brain and nervous system.

It is in this mind of ours that all objects of our creation first originate. The architect has in his mind the building, which he transmits to paper ; so has the poet the beautiful thought which flows from his soul.

## LIFE.

Life is mental not physical ; spiritual, not anatomical, and it has for a motive power, electricity, known as magnetism.

Gender exists in the mind and the male spirit creates the male organs, and the female spirit creates the female organs. This gender spirit creates each individual, well formed male or female, according to the amount of the gender spirit it individually contains. Thus a strong, large, hairy-faced, long limbed person contains a great amount of the male spirit, and a delicate, soft featured, fine-haired, broad-hipped individual, will be composed largely of the female spirit of gender.

Love is a feeling that originates in the mind and between the sexes. It is a compound affection, consisting of esteem, benevolence and animal desire and animal magnetism ; is the thing that creates gender.

All living things from the beginning were created male and female, so as to multiply and replenish the earth, in their particular kind. Every vegetable, germ, creeping thing, fishes, fowls, animals, human beings as well, have male and female, except those that contain the elements of both in the one body. Animal magnetism, like other forms of electricity, contains two elements—the positive and the negative. The positive corresponds to the male element and the negative corresponds to the female element. The positive element attract the negative and repels the positive—so it is in the two genders. It is this animal magnetism or love that attracts the two genders, that blends the two spirits together ; it



is emotion—a desire to commune with each other, and it proceeds from the mind and is the all-powerful principle which attracts the sexes and keeps them together and causes them to unite in reproduction.

## THE MALE.

Man is the positive being. He it is that originates the life germ. He was created for the express purpose of initiating life, by impregnating woman. The most perfect male is the one best fitted to fill the office of reproduction.

All males when perfectly sexed, have stability, decision, force, firmness and courage, power, large bones and strong muscles, large nose and chin, prominent cheek bones which form an abrupt outline.

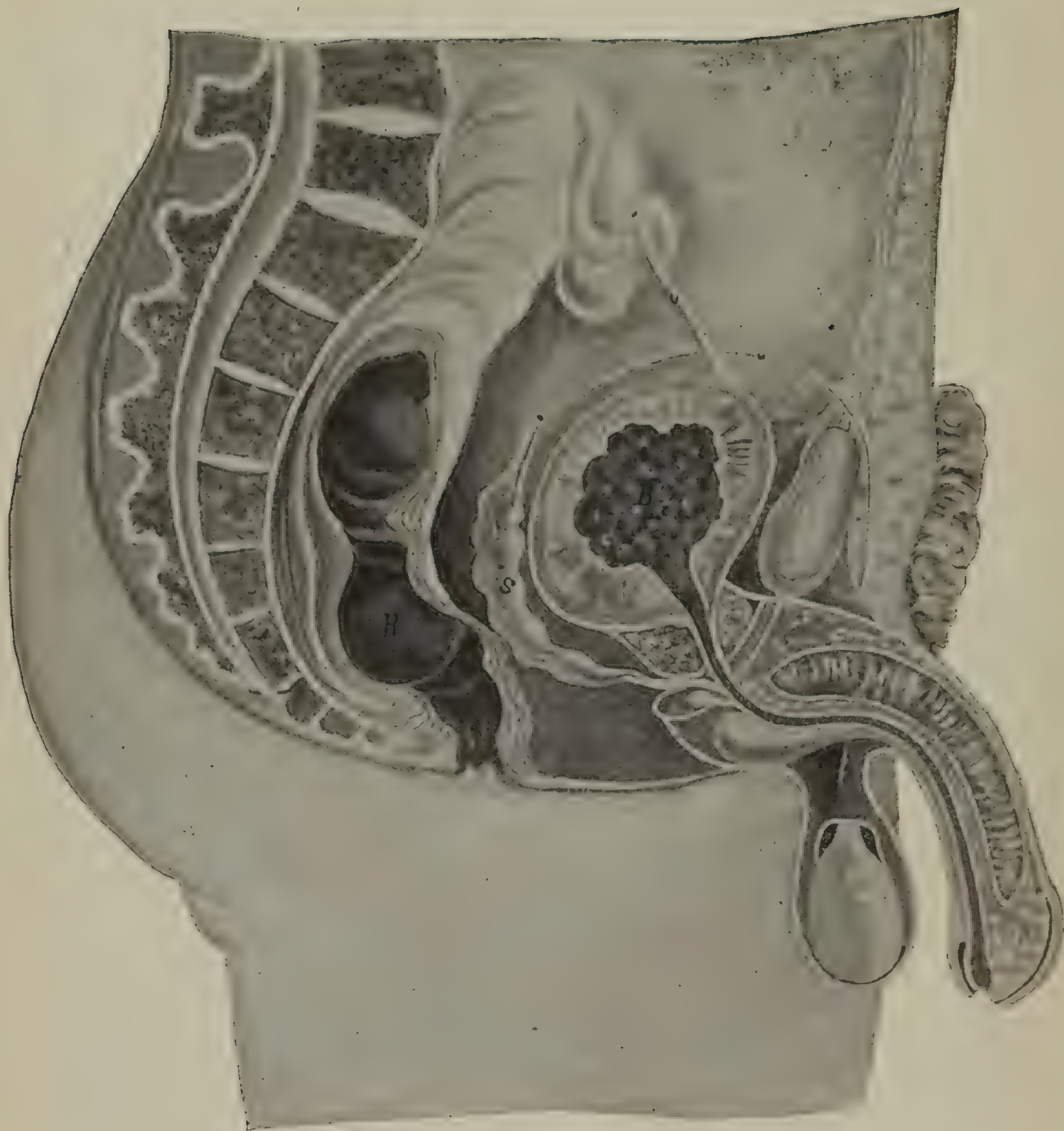
All women love large and strong men, with courage, snap and an elastic step. They like and often lionize wrestlers and prize fighters. Such men have strong shoulders, deep chests, and as a rule they have deep voices and are stoutly built. The male skeleton is heavier and larger built than the female. The pelvis is heavier and narrower, the bones thicker and rougher. From the attachment of the large muscles, the pelvis tilts more forward, and the large bony projections are not so wide as in the female pelvis. The pelvis is divided into the upper and lower pelvis, and in the female it is larger than in the male, the male pelvis being narrower and the little coccyx bone with the two ischium bones form a very narrow opening only large enough to contain the male pelvic viscera, but more about the pelvis when we come to the female organs of generation.

## THE MALE ORGANS OF GENERATION.

The male organs of generation consists of the testicles and epididymis, contained in the bag or scrotum. The vassicilæ, seminales, prostate gland, glands of cowper, and verumontanum about the neck of the bladder, and lastly, the penis composed of the corpora cavernosa, corpus spongiosum, glans penis, and urethra.

**The Testes** are two small glandular organs first situated in the scrotum which secretes the semen or germ fluid. They are suspended by the spermatic cord. In early foetal life the testes are con-





THE MALE PELVIC ORGANS.



tained in the abdominal cavity ; before birth they descend to the inguinal canal, and with the spermatic cord, they pass through the abdominal wall, through an opening called the external ring and descend into the scrotum, becoming invested with numerous coverings. The scrotum is a cutaneous pouch, formed by an elongation of the skin, and contains the testes and the spermatic cord. It is situated in the lower part of the body, and is an elongation of the abdominal skin. Under the influence of warmth and in old and debilitated persons it becomes elongated, but under the influence of cold and in young and robust persons it is short, corrugated and closely applied to the testes.

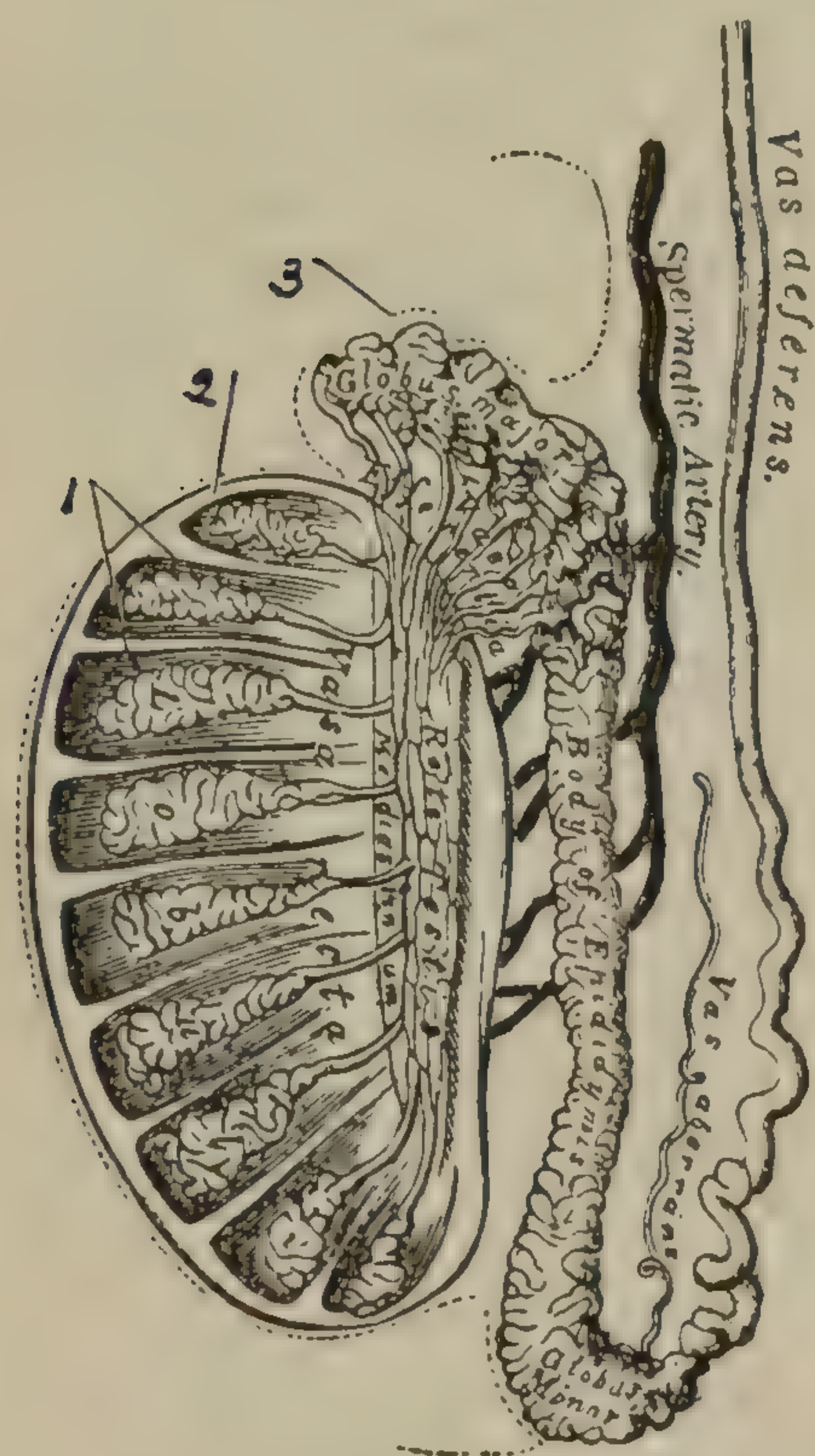
The testicles are two in number, varying in size in different individuals. But they are usually about the size of an English walnut.

Each of these testes are of oval form, and are compressed laterally. The back part of the testicle, the part to which the cord is

attached, is tilted backward and upward. The testicles, although they seem upon first examination to be but hard globes or balls, are in fact, glands. They are divided into cells or apartments in which the semen is manufactured.

Each of these cells or little apartments contain three or more tubes, which can be easily unraveled under water, and when unraveled they are about sixteen feet in length. They begin in a blind end and have a mouth which opens into a tube. The tubes are about the one hundred and fiftieth part of an inch in diameter, and there are about four hundred of them. These seminal cells differ in different cells, some of them being composed of small daughter cells, and are named spermatoblasts, which by a series of changes become converted into spermatozoa. In some

of the other cells, the gradual transition of the spermatoblasts into spermatozoa can be easily traced. These little tubes unite and

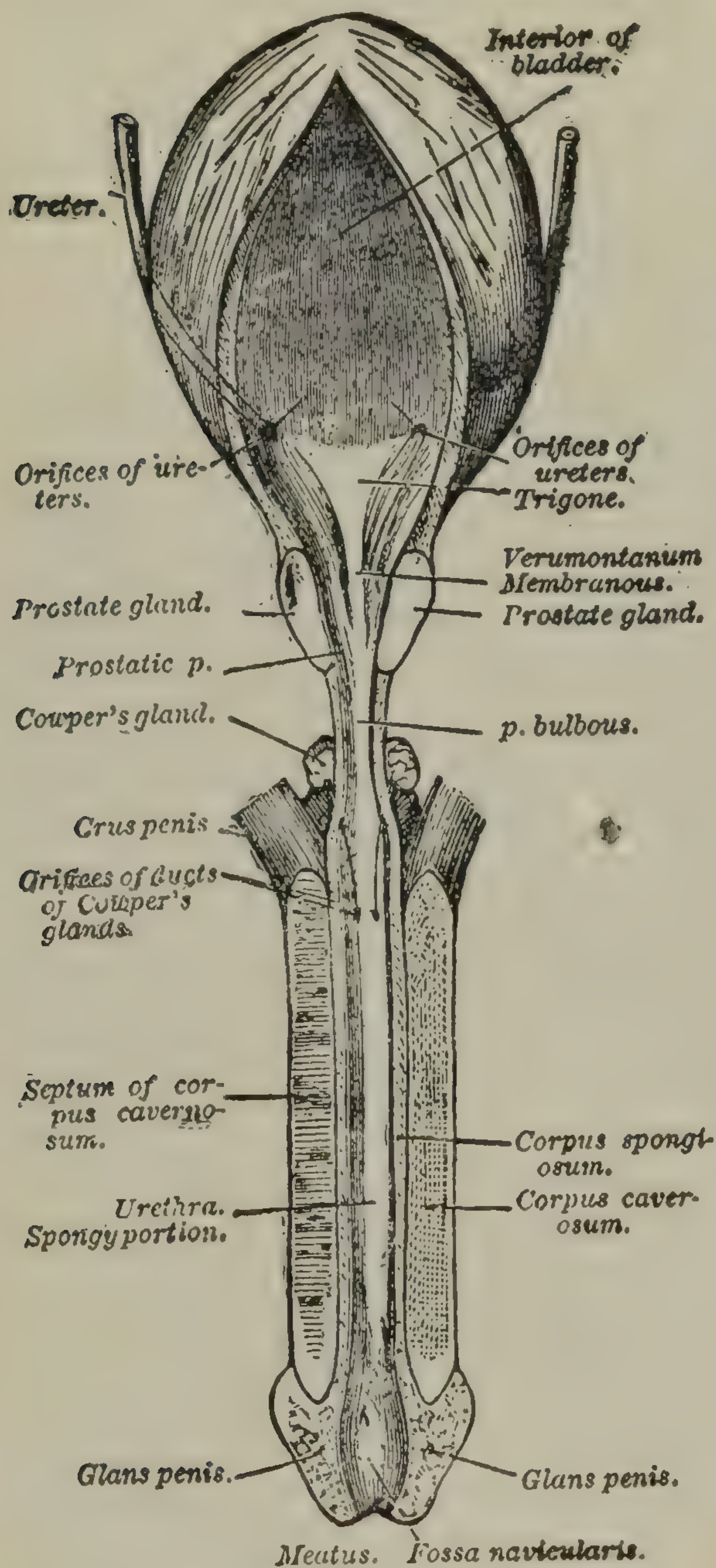


SHOWING THE FORMATION OF THE TESTICLES,



form twenty or thirty larger ducts, about the one-fiftieth of an inch in diameter; these again unite to form a network of little ducts which pass upward, and form the vassa efferentia which carry the seminal fluid into the epididymis. These tubes

again unite at the base of the testicle, and form what is known as the vas deferens tube, leading from the base of the testicle to the base of the bladder. In passing upward it passes up along the spermatic cord and on the outside and over the pubic bone, then through the abdominal ring and back through to the prostate gland and the base of the bladder. In this position it becomes enlarged and sacculated, and then narrows to the base of the prostate where it unites with the duct of the vasculosa seminalis in a little duct that leads into the urethra. The vas deferens is hard and cord-like, and is about two feet in length, cylindrical in form, and has a very small canal measuring about a line or one-eighth of an inch in diameter.



INTERIOR PENAL STRUCTURE.

PENIS, PROSTATE AND COWPER'S GLANDS.

somewhat of the form and size of a large chestnut, being broad behind and pointed in front, and its weight is about six drachms. It is composed of three lobes. The middle lobe is the only one of

The Prostate Gland is a firm glandular body, situated at the neck of the bladder and the beginning of the urethra. It is



any interest to us. It is situated beneath the neck of the bladder behind the commencement of the urethra and above and beneath the ejaculatory tubes. The prostate gland is perforated by the urethra and the ejaculatory ducts. The prostate gland is perforated by the urethra above and the ducts below. It is a very dense glandular structure, and having ten or twelve little ducts which open into the urethra secretes a peculiar thin white fluid which mingles with the semen.

**Cowper's Glands** are two small bodies about the size of a pea situated before the prostate gland and near the bulb of the urethra. Their ducts open near the urethra and they secrete a fluid which lubricates the urethra.

**The Penis** is the organ of copulation. It consists of a root, a body and a glans penis.

The root of the penis is strongly connected to the rami or front of the pubic bone, and by strong ligaments and muscular tissue. The extremity or head is known as the glans penis. It forms an obtuse cone flattened from above downward, and at the summit is an opening. The base of the gland forms a projecting border and around the base is a number of small glands which secrete a sebaceous matter that readily decomposes and gives off a peculiar odor.

The body of the penis is the part between the root and the extremity. In the flacid condition of the organ it is cylindrical, but in the state of erection it is triangular, and with the broadest side turned uppermost to form what is known as the dorsum of the penis. The body is covered with an integument which is fastened to the glans penis and is deflected back, forming a loose and sliding surface. The penis is composed of the corpora cavernosa, corpus spongiosum, urethra and glans penis. The corpus cavernosa forms the chief part of the body of the penis, and consists of two large ligamentous tubes firmly united together and their junction is marked by two grooves, one above and the other below, the lower being much the larger, and the corpus spongiosum is situated in the lower one.

In the ends of the corpora cavernosa in front is a rounded extremity which is covered by the glans penis posterior, they terminate in the crura penis which is attached to the rami of the pubes and the ischium bones.

Its structure is of a dense elastic tissue which forms the sheath and internally they consist of numerous cells, which



freely communicate with each other, the corpora cavernosa is divided by a dense septum or partition which is perforated by numerous fissures. The corpora when divided transversely presents the appearance of a sponge, and is the part that fills up with blood, and during an erection, and on account of there being such a small opening in the posterior surface, the blood can not flow out as rapidly as the artery can supply it. This is the cause of the erection. Sometimes from accidents this small valve in the corpora does not allow the blood to flow out. It then causes a condition of continual erection. This is known as priapism.

**The Corpus Spongiosum** encloses the urethra, and is situated in the groove on the under fissure of the corpora cavernosum. It begins posteriorly or at the base of the bladder, and in what is known as the bulb and anteriorly it terminates in the glans penis or head of the penis, being composed of white, elastic and spongy tissue, easily filled with blood, and is a protection to the urethral canal.

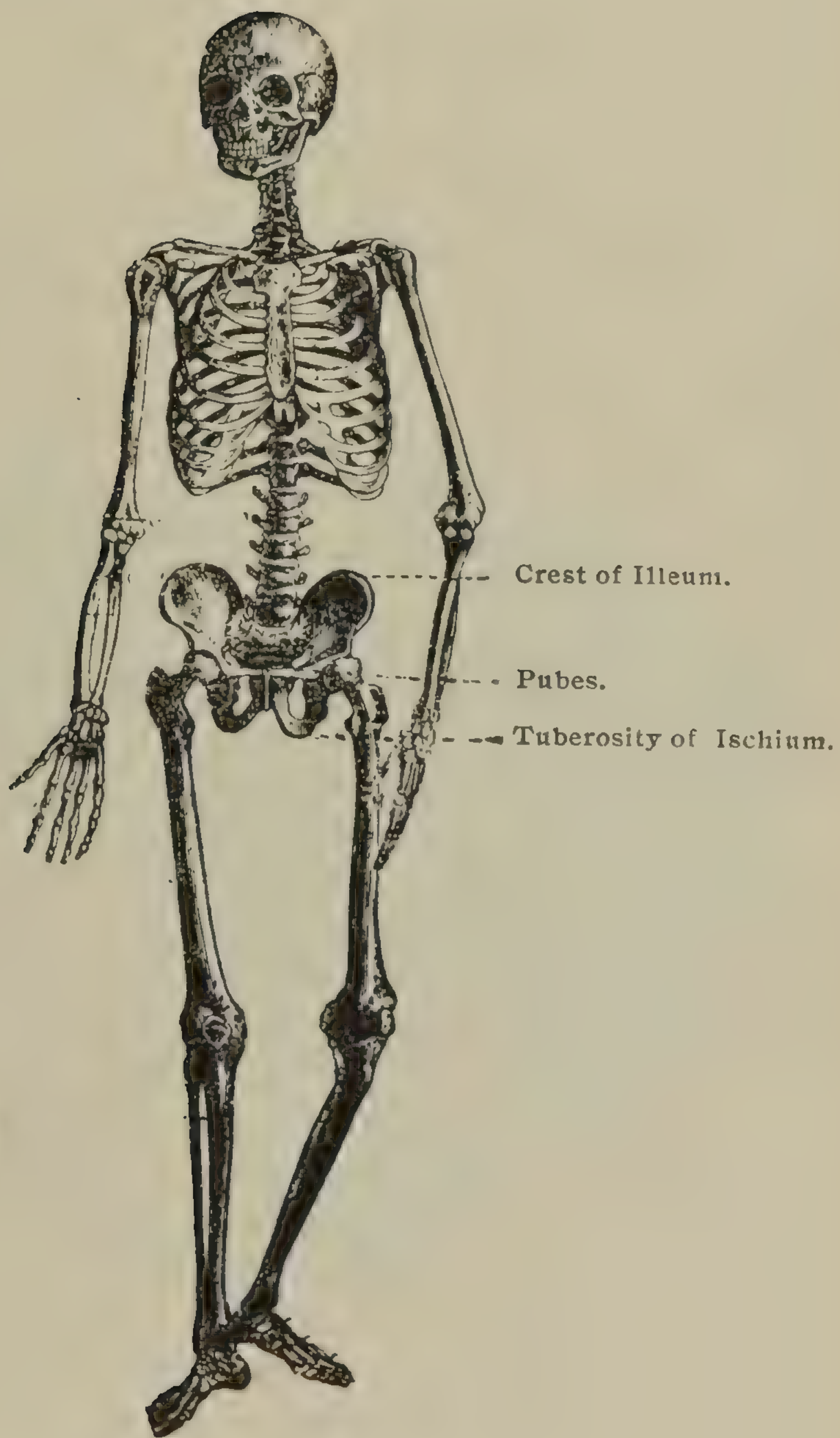
**The Urethra** is a long membranous canal, extending from the back of the bladder to the end of the penis. It is lodged in the groove of the corpora cavernosa and is surrounded by the corpora spongiosa. It is not one continuous passage nor of one size, but is constricted in front of the gland and posteriorly at the bulb. The lining membrane is a continuation of the walls of the bladder; the openings are the seminal and prostate ducts, for the passage of the semen.

### PHYSIOLOGICAL ACTION.

The spermatozoa is formed from the spermatoblastic cells and carried through the little cells to the vassa recta and through the vassa recta to the testes and thence to the vassa efferentis, and thence to the coni vasculosi, to the epididymus to the vas deferens, to the base of the bladder, and it is there stored up in the bulbar extremity or enlargement of the vas deferens and the vesicles seminales on the surface of the bladder, where it remains until wanted in impregnation.

During the act of copulation the walls of the vesicle seminales and the vas deferens contract and force the spermatozoa out into the canal of the urethra, at the same time the prostate gland contracts and forces its fluid into and mixes with the semen. Then the little glands of Cowper secrete the lubricating fluid and





SKELETON SHOWING THE PELVIS IN POSITION.



the urethra and the corpus spongiosum contract, and thus the seminal fluid is carried to the glands penis. It here meets with the narrower portion of the urethral canal. The corporosa again contracts and the fluid is ejected with considerable force and high up into the vaginal canal. Some of the fluid occasionally passes into the cavity of the womb.

### THE FEMALE.

The head of the female is broader, fuller and more rounded out at the top of the head, the hair is softer and finer than that of the male. The pelvis is the glory of women. It is this that makes her hips wide, her thighs large, a tapering limb and a small ankle and small feet. She has a smooth and rounding figure, full breasts, long neck, tapering arms, small hands, and a small and full face. The lower part of the abdomen is full and rounding; the upper part is flat, and the waist smaller than the chest. The fullness of the bust and the largeness of the pelvis give her the appearance of being small waisted. The body is long, shoulders narrow, and the back is broad.

Women as a rule have literary talent, and are natural speakers, and talking is her special accomplishment. She loves music, and drawing, painting and sculpture. Her perception is well developed; she sees much and is secretive; she has parental love well developed, hence her love for children. She is sentimental, emotional, has exquisite taste, loves color and show, and is fond of flattery. She is sympathetic, and everything that is sweet and lovable. Woman was created woman for the express purpose of bearing and nurturing children.

She receives from the male the rudiments of life, and she must supply the food and nourishment until such time as the new being can take care of itself. She supplies the spirit pabulum and the new being must receive from her the finer traits. She transmits mental traits, poetry, brilliancy, imagination, oratorical, artistic, and musical talent.

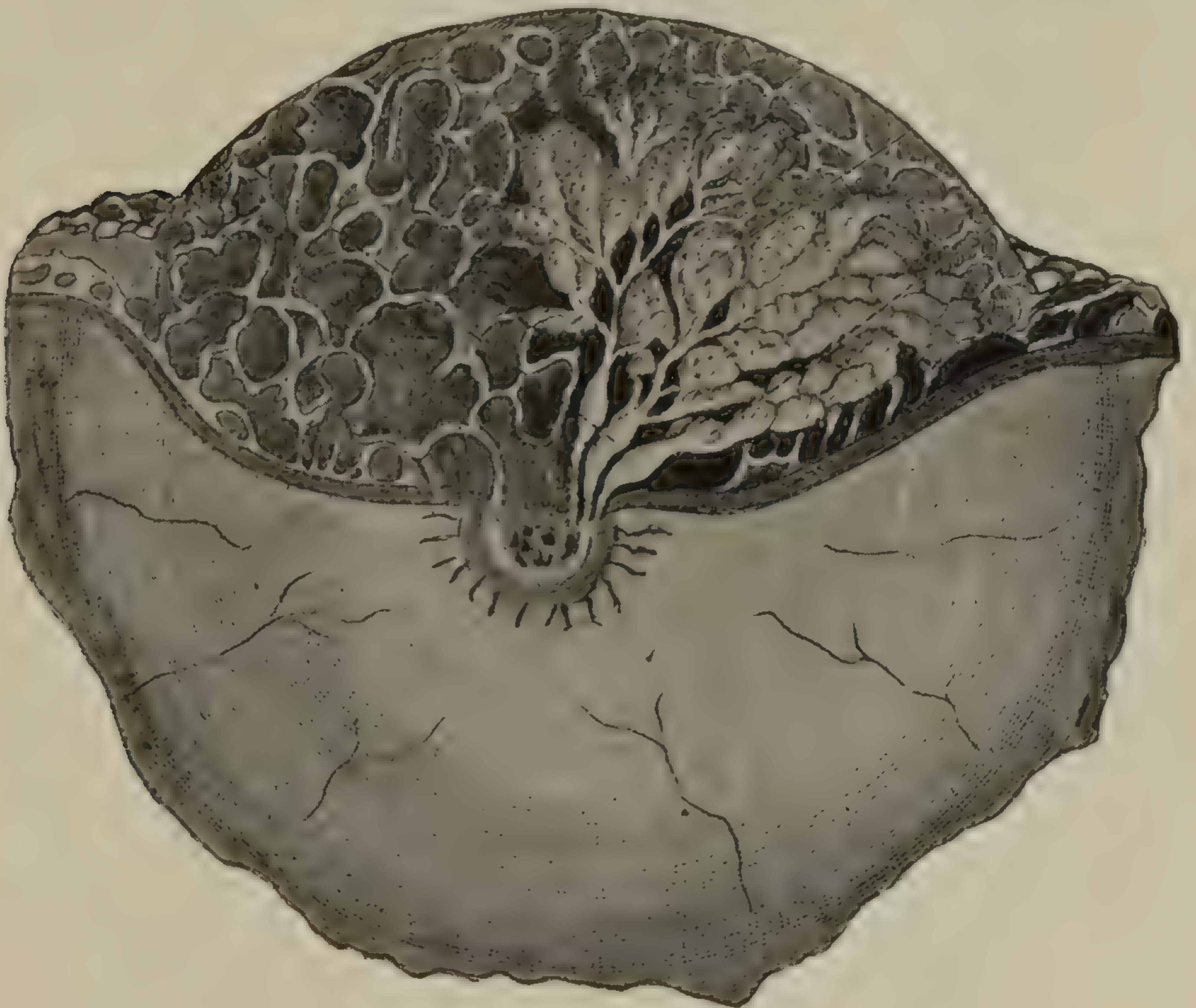
Power and originality descend from the father. Women are pious, and two-thirds of the church-goers are women; they are natural nurses and physicians. Their chief object is to bestow, and they are strong in the spirit of prophecy and spirituality, and are full of inspiration, and can foresee and foretell many things. Men arrive at conclusions through reasoning, while women jump



at conclusions ; but men are guided by her intuition and impressions. Woman is full of companionship, and she early in life selects some companion and affiliates, dotes on and befriends, and makes him her friend. She makes common cause and works for the mutual good for both.

### THE FEMALE MAMAE.

The Female Mamae or breasts are accessory glands of the generative system and secrete the milk. At puberty they become much enlarged in the female. They exist in the male, but rarely become enlarged or secrete the milk. They are two glandular



FEMALE MAMAE.

bodies, situated in front and on the upper surface of the chest, or thorax, on the two large pectoral muscles, and covered by the ordinary integument. They consist of a nipple or red colored projection from the middle of the breasts, which is capable of erection. They contain twenty to twenty-five lactiferous tubes, which terminate upon the surface of the nipple.

**The Areola** is a reddish-brown or rose'colored circle in virgins. It is of a brownish black color in females who have borne children.



These surround the nipples and are supplied with numerous follicles. The glandular substance is imbedded in fat and consists of numerous separate glandular portions, from which the lactiferous tubes arise which enter the nipple.

**Structure**—The gland tissue, when freed from fat, is of a yellowish or pale pink color, firm in structure and somewhat flattened, and consists of lobes and lobules connected together, blood vesicles and ducts.

The smallest lobules consist of a cluster of rounded vesicles, which empty into the larger ducts and then into one of the canals, which again unite with one or more of these canals and form a section of the breast.

The smallest lobes contain cells that, during the state of activity, or milk producing period, secrete oil globules, which are then mixed with the lumen of the alveolus and ejected as milk.

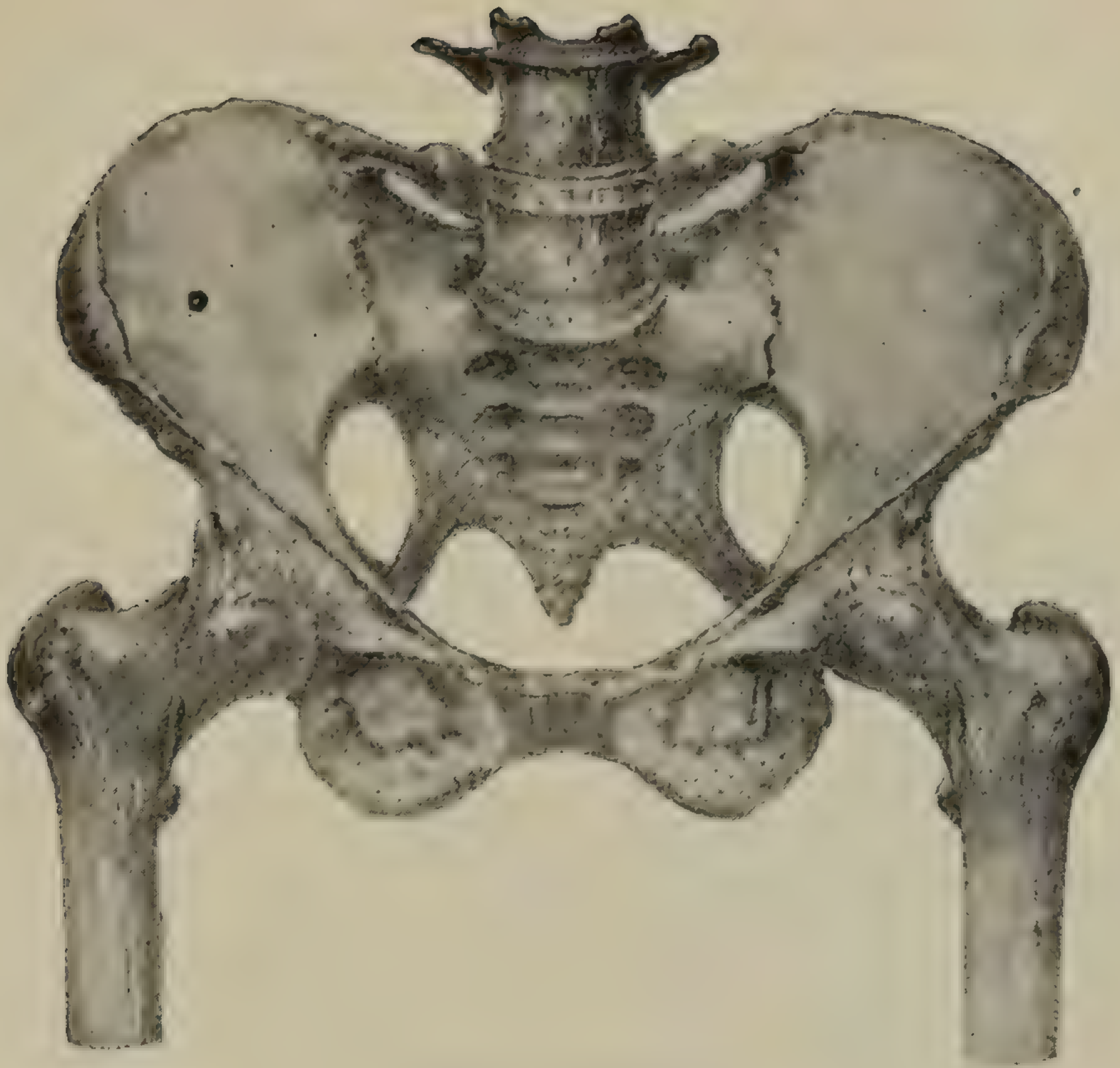
## THE PECULIARITIES OF THE FEMALE PELVIS.

It is larger and more delicately formed in the female than in the male. The ilia or wings of the pelvis spread themselves widely in the lateral or sides, while in the male they rise more perpendicularly. The brim of the male pelvis is longest from before backward, while the female is largest from side to side, so as to support the abdominal viscera during the period of maternity. The cavity of the female pelvis is larger and more capacious and the sacrum more curved than in the male. The rami of the ischium and pubes are also much smoother on their surface and the anterior edges are more turned outward.

**The Pelvis** consists of the sacrum, coccyx and two innominate, or nameless bones.

**The Sacrum** resembles a pyramid with the base upward and the apex downward, having an anterior or front surface concave and the posterior or back convex, and two edges. The sides are large and broad above, and form an uneven, narrow surface as they descend. It is joined on the two sides by the two innominate, and above by the last lumbar vertebra, and has an extension of a small triangular bone similar in shape and known as the coccyx. It is this little bone that gives so much trouble during and after parturition. By sitting or through sedentary habits it becomes turned inward, and in time the joint be-





FEMALE PELVIS.



MALE PELVIS.



comes obliterated, and during the passage of the foetal head it sometimes snaps and pushes back out of the way.

**The Os Coccyx** is but the rudiment of the tail in the lower animals; so in man the little tail rudiment turns inward and under, while in the dog it turns or curves upward. It is the thermometer of the feelings of the dog.

**The Os Innominata** are three bones in one. Anatomists divide it into the illa, ischium and pubes, as it originally existed in the foetus. The illium is that portion seen at the top part, and has the appearance of wings or ears, while the ischium forms the lower or part that the body rests upon when in a sitting position. The pubes are the part seen in front and form a double curve.

The pelvis is divided by obstetricians into the upper and lower Pelvis by a line known as the linea pectinea, or ridge, extending from the crest of the illium to the pubes between the illium and ischium and to the sacrum.

The upper or false pelvis is defective in front, is elevated at the sides, and has the prominent part of the sacrum and the lower lumbar vertebra posteriorly as its border.

**The measurement** of the upper or false Pelvis is as follows: From the two prominent portions to the other, or superior process, is about nine inches. From the middle of the crest of one illeum to the other is about eleven inches, and from the top of the crest to the linea pectinea (the line which divides the true from the false pelvis) is about three and one-half inches.

The lower or true Pelvis has the appearance of an inverted cone, and with two straits and a basin or cavity. The cavity of the Pelvis is the part contained between the superior and inferior straits. The superior strait is elliptical in shape, and formed by the top of the symphysis of the pubes, the lines illeo pectinea and the promontory of the sacrum. The inferior strait is oval in shape. It consists of the rami of the pubes and ischium on the sides, the sub-pubic ligament in front, and the sacro-ischiatic ligaments and the coccyx behind.

**Measurements and Axis**—The axis of the pelvis is an imaginary line drawn from the point of the coccyx at right angles to the strait, which if continued would pass out at the umbilicus. The circumference of the strait is thirteen inches. The sacro-pubic diameter is four inches. The oblique diameters from points in the two lines illeo pectineas to the opposite



sacroiliac symphyses each are five inches; the transverse or vertical diameter, five and a quarter inches. The circumference of the inferior strait is twelve inches; the anterior or front and the posterior or back, from the pubic ligament to the coccyx, is from four and a half to five inches; the transverse diameter is four inches and the oblique is four inches; and the axis of the lower pelvis is an imaginary line drawn from the middle of the sacrum out of the pelvis midway between the pubes and ischium of each side.

The other important measurements of the pelvis are as follows: From the top of the symphyses pubes to the lower edge of the sub-pubic ligament is one and a half inches. From the top of the sacrum to the point of the coccyx is five and a half to six inches.



BLACK LINES SHOWING AXIS OF PELVIS.

## THE EXTERNAL ORGANS OF THE FEMALE.

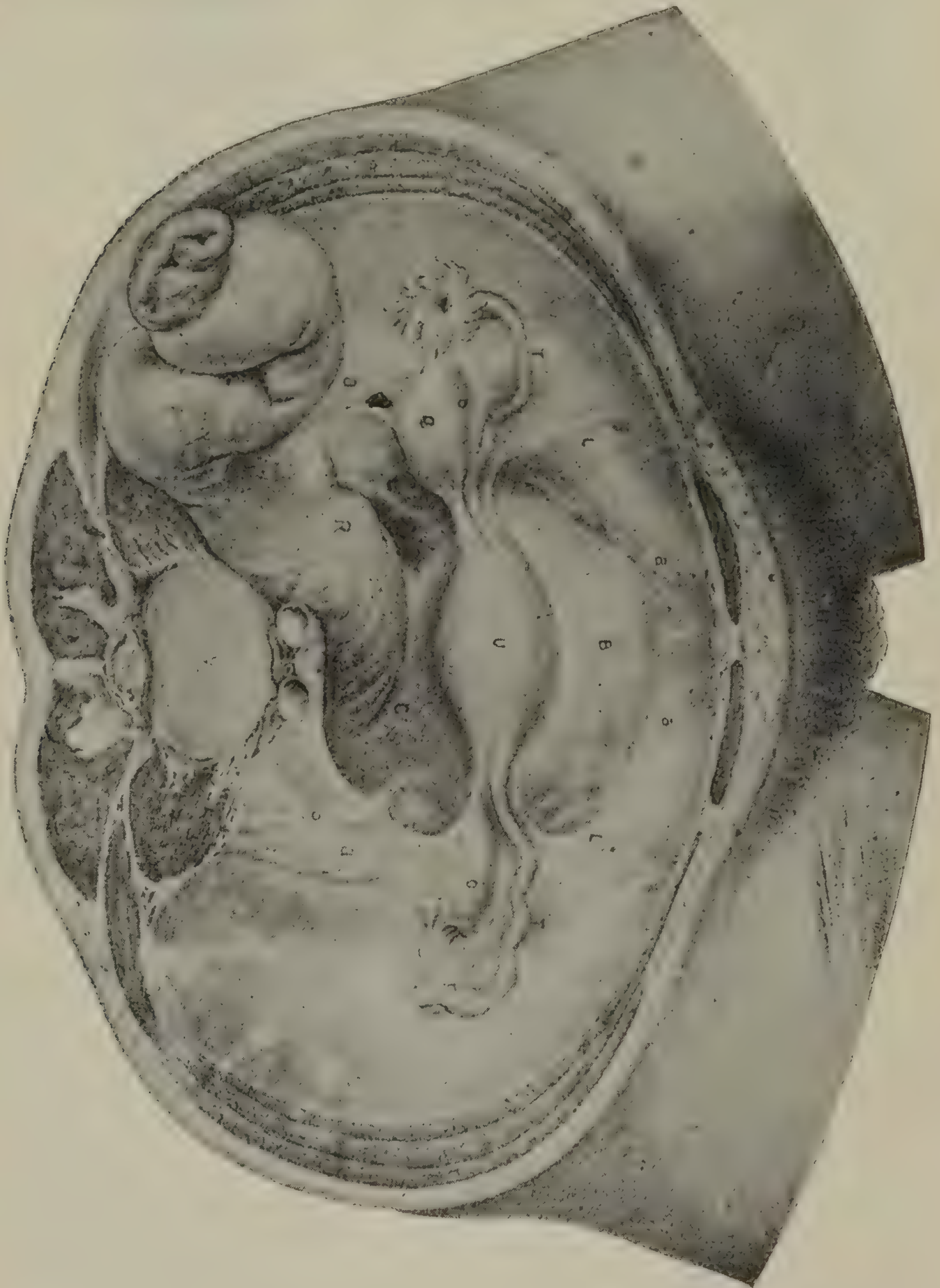
The external organs of generation in the female are the mons veneris, the vulva labia majora, clitoris, meatus uranarius and the perineum. The mons veneris is the rounded eminence in front of the pubic symphysis. It is formed by a collection of fat beneath the integument and becomes covered with hair at the time of puberty, and is at the top of the vulva. The vulva or fissure is formed by the two labia joining together and contains the lesser labia or nymphæ, the clitoris, the vestibule, the meatus urinaris, the vulvar orifice of the vagina, the hymen, the fossa navicularis.

**The Labia Majora** are two prominent longitudinal folds extending downward from the mons veneris to the boundary of the perineum in front of the anus.

**The Labia Minora** or nymphæ are two folds of the cuticle



which extend longitudinally from the clitoris obliquely downward for about an inch and a half in front. The two labia minora meet and form the frenum of the clitoris.



THE RELATION OF THE FEMALE PELVIC ORGANS WITH THE PELVIS AND WITH ONE ANOTHER.

The **Clitoris** is an oblong, firm, projecting body, immediately under the superior commissure of the labia majora, at the beginning of the nymphæ called the reputium. It consists of two corpora cavernosa united in front, forming the gland, and is divided



posteriorly into two cura, which are attached to the rami of the pubes. It is composed of erectile tissue enclosed in a dense layer of fibrous tissue, and is similar to the male penis.

**The Perineum** is that portion of the muscular tissue from the posterior commissure of the vulva to the point of the coccyx and between the two tuberosities of the ischium. It is a very distensible body and is the support of the pelvic viscera and contains the anus and the vulva.

**The Meatus Urinalis** is the opening of the urethra. It is a small, round, slightly elevated tubercule, which on pressure leaves the urethra opening.

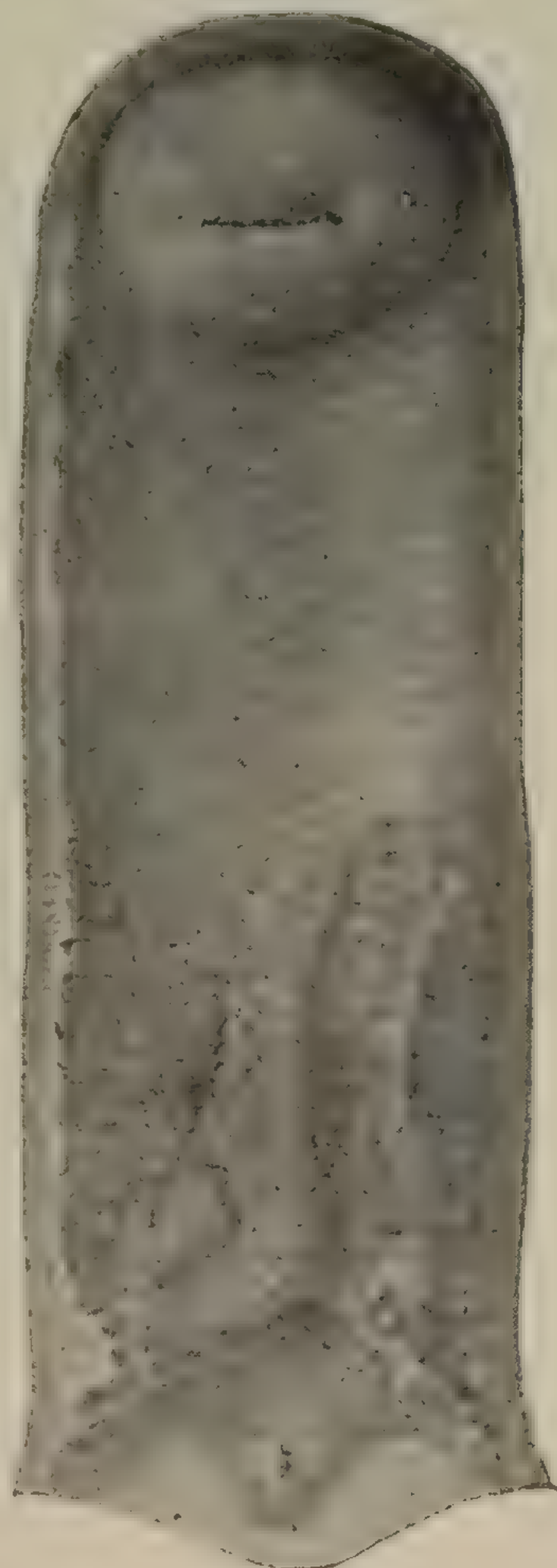
**The Urethra** is the little duct that carries the urine from the bladder. It is composed of elastic tissue and is about a quarter of an inch in diameter and one and a quarter inches long, and is separated from the vagina by the elastic tissue of the vaginal wall.

#### THE INTERNAL ORGANS OF THE FEMALE.

The internal organs of generation are the vagina, uterus, fallopian tubes, ovaries and their ligaments.

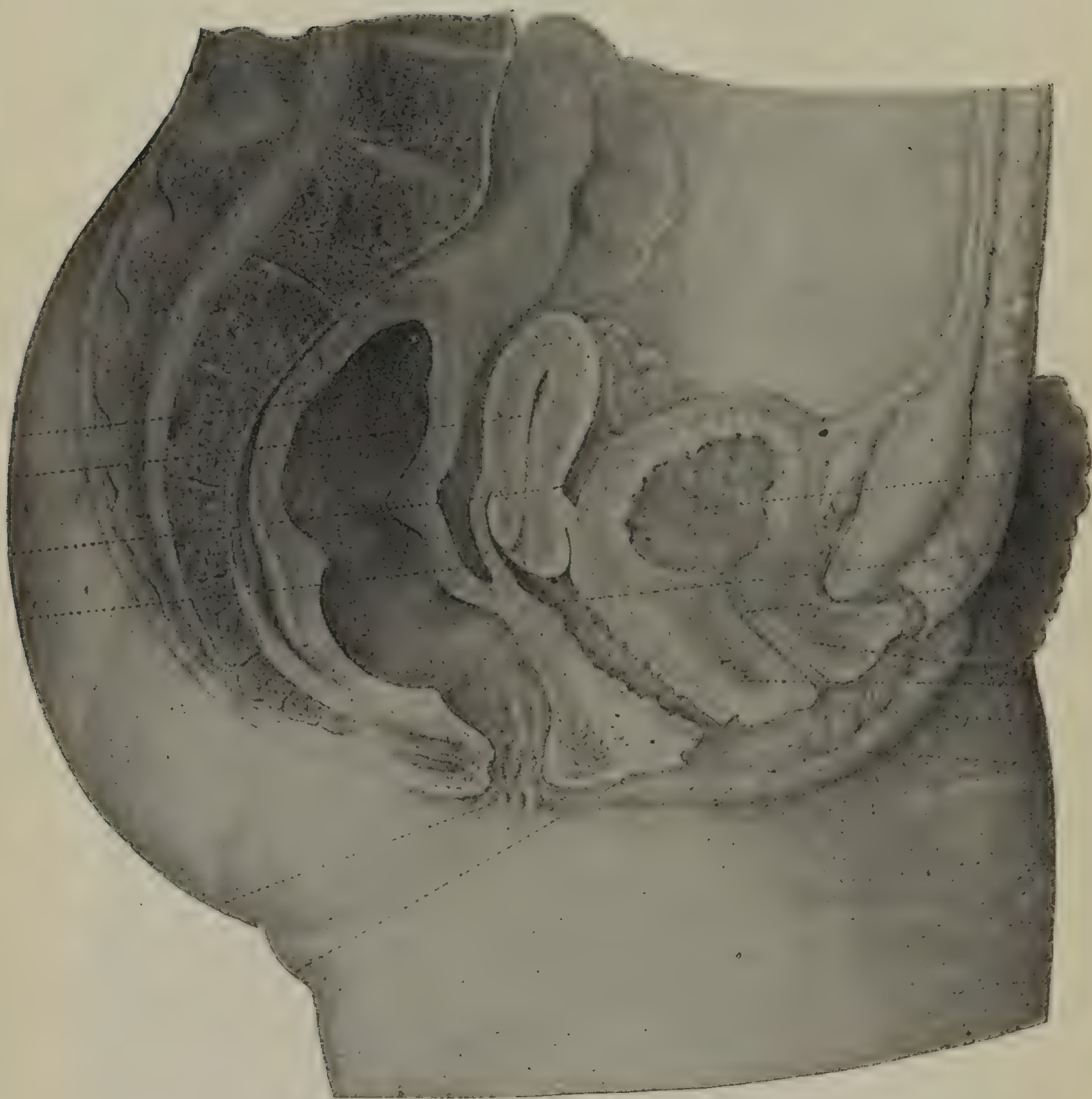
**The Vagina** extends from the uterus to the vulva, and is situated in the cavity of the pelvis between the rectum and the bladder and is about two and a half inches long in the front portion and about three inches in the posterior wall. It is constricted at the lower portion and dilated at its juncture with the uterus. It consists of an internal mucous lining and a muscular coat between the two layers of erectile tissue. There are a number of rugæ called the columns of the vagina, but these disappear after parturition.

**The Uterus** is the organ of gestation, receiving the fecundated ovum, supporting and retaining it during the development of the foetus and at the time of parturition it is the principal organ of expulsion. In the virginal state it is about the size of a small pear and is flattened from before backward, and the



FULL SIZE VAGINIA, SHOWING  
NECK OF WOMB.





PERPENDICULAR SECTION OF PELVIS, FROM FRONT TO BACK, SHOWING POSITION OF PELVIC ORGANS.



base, or upper end, is directed upward and forward; the apex, or neck, pointing downward and joined to the vagina. It is held in position by the broad and round ligaments. The uterus measures about three inches from above downward and about two in breadth at its widest portion and one inch in its smallest or vaginal end.

It is divided into the fundus, body and neck; the fundus is that portion above the fallopian tubes; the body is below the origination of these tubes and the neck of the uterus is the lower portion of the organ; the internal surface or cavity is



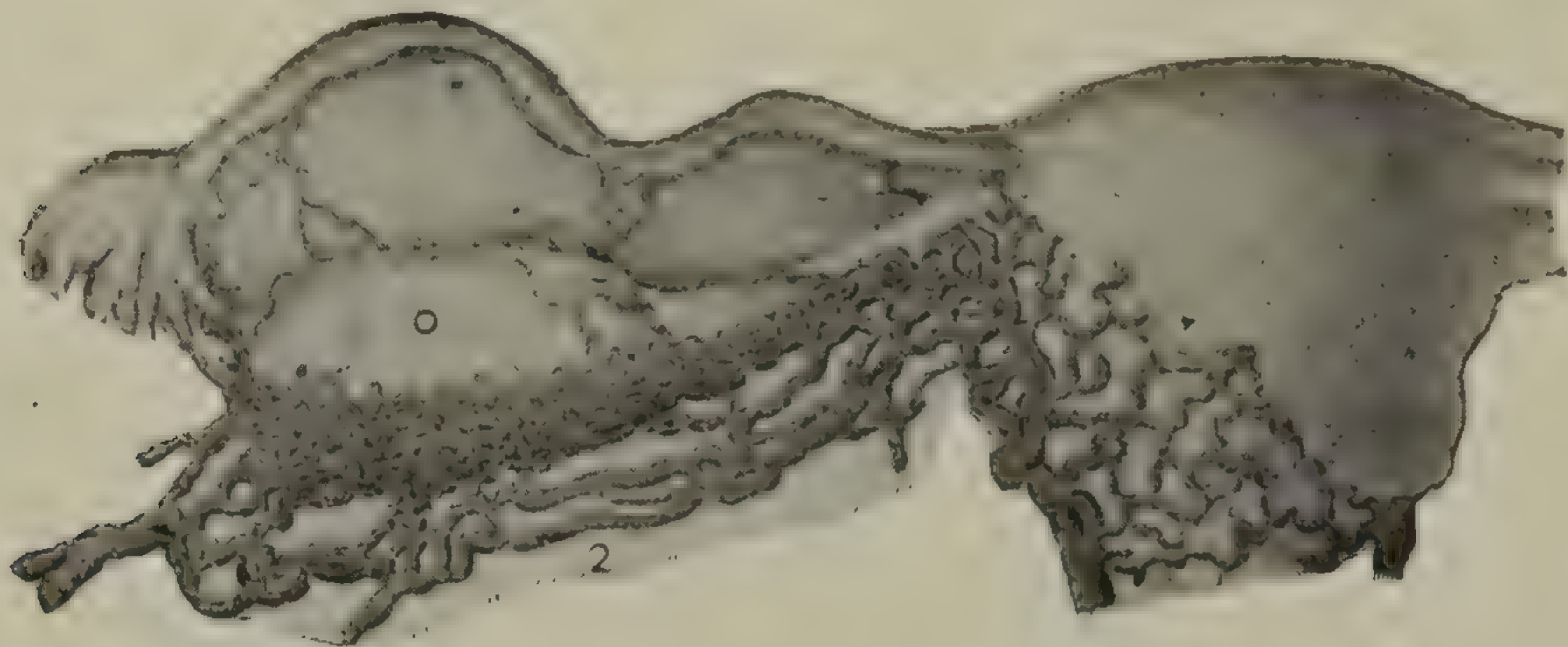
THE UTERUS DIVIDED, SHOWING INTERNAL STRUCTURE, FALLOPIAN TUBES AND VAGINA.

triangular in shape with the base uppermost. Below is the neck which is barrel-shaped, leaving a slight constriction above and below. In the neck of the uterus are a number of small vesicles called the glands of Nabothi. The uterus is composed of three coats of muscles with the fibres arranged in layers. The internal layer is arranged so that the fibres run transversely. The



external layer forms a complete sphincter and is lined with a thin mucous membrane that is continuous with the vagina or fallopian tubes.

**The Fallopian Tubes** are two in number and convey the ova from the ovaries to the cavity of the womb or uterus. They are

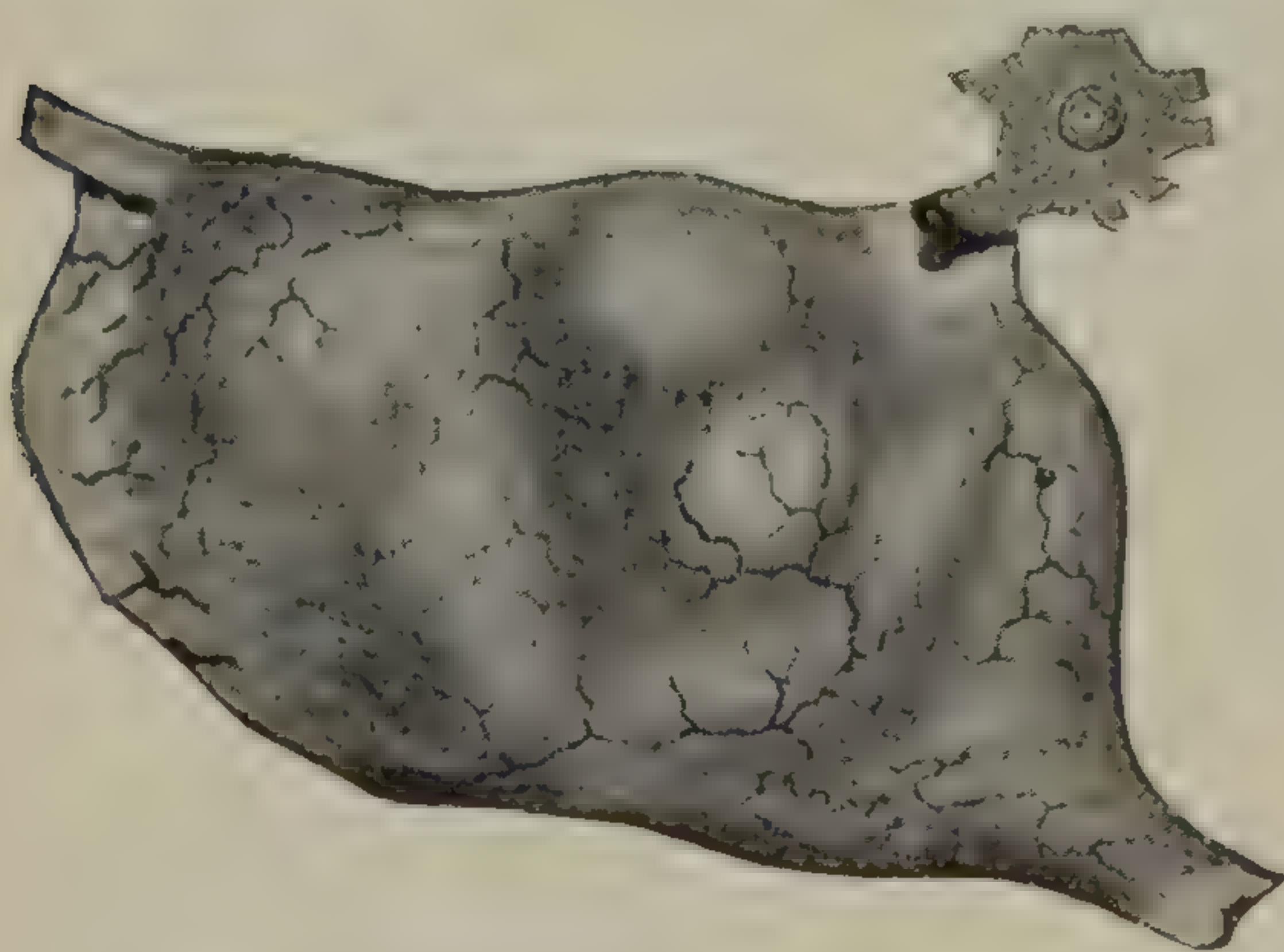


SHOWING TOP OF UTERUS, FALLOPIAN TUBES, FIMBRIATED EXTREMITY AND OVARY IN POSITION

small hollow cylinders, four or five inches long, as large as a quill and extend from the superior or upper angles of the uterus to meet the iliac fossa of each side, where each terminated in a fimbriated extremity, and are enclosed in the upper edge of the broad ligaments. The structure is similar to that of the uterus.

### THE OVARIES.

The ovaries are the same as the testes in the male and are situated in the upper part of the broad ligament, behind and a



THE OVARY SHOWING THE ESCAPING GRAFFIAN VESICLE.

little below the fallopian tubes and near the upper angles of the uterus to which they are attached by the ligament of the ovaries. The ovaries are oblong bodies flattened from before backward, and are about the size and shape of a large almond. The surface is generally smooth in those who have never been

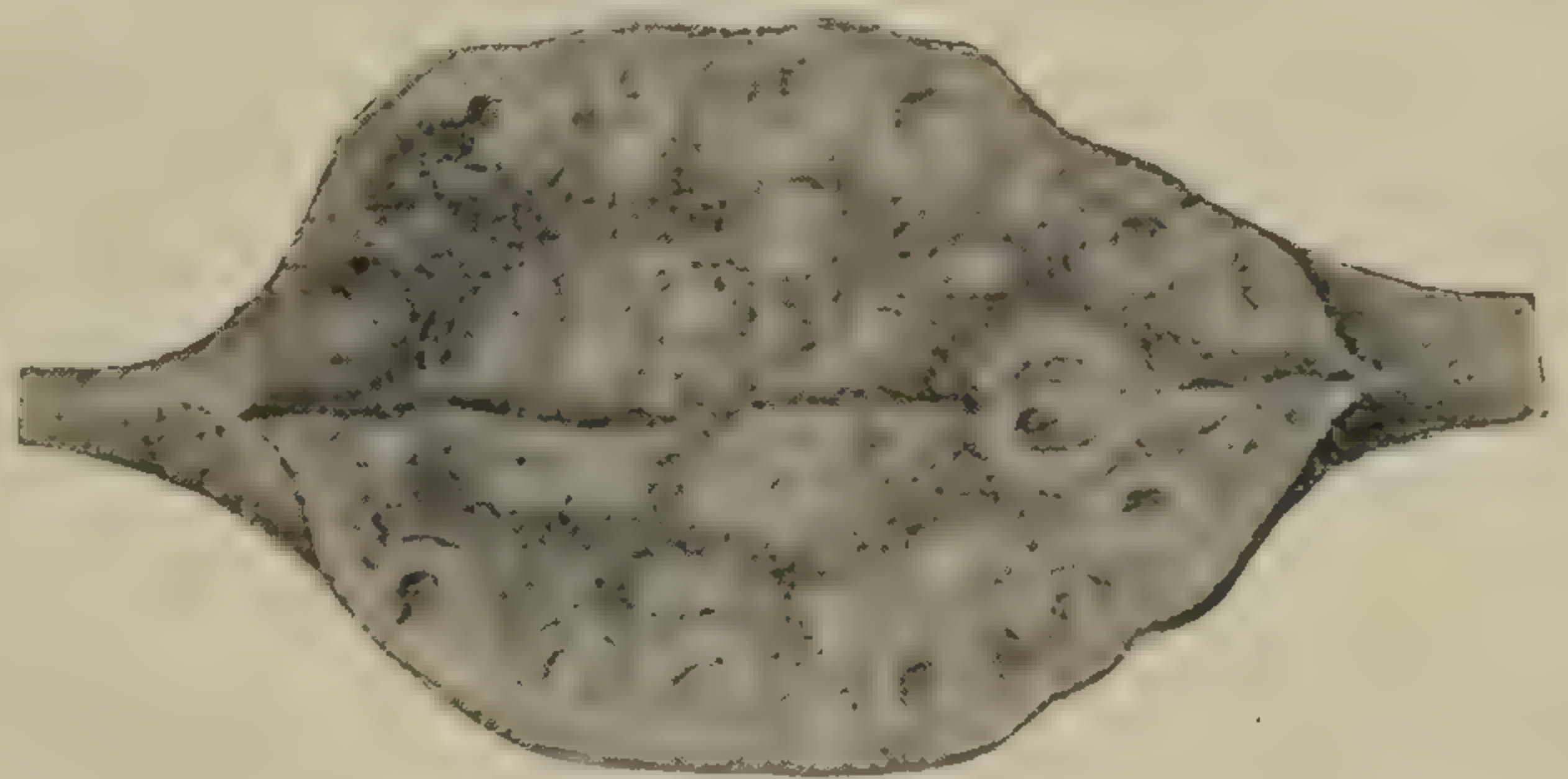
fecundated, but in those who have borne children the surface is filled with irregularities. About the age of puberty there is found in the perinchyma of the ovaries the graffian vesicles, or vesicles which contain the germs.



The ovaries consist of a number of graffian vesicles imbedded in the stroma and meshes or framework of the ovary and is surrounded by a covering of the peritoneum. The stroma is a peculiar soft tissue and is well supplied with blood vessels.

**The Graffian Vesicles**—Upon an ovary numerous round, transparent vesicles are to be seen. These are the graffian vesicles. Immediately beneath the outside layer is seen a large number of minute vesicles about the one-hundredth part of an inch in diameter. These are the

graffian vesicles in their earliest condition and they are extremely numerous in the ovary of the young child. During the whole of the child-bearing period, there are to be seen in the ovary graffian folli-



OVARY CUT IN TWO SHOWING GRAFFIAN VESICLES FORMING.

cles in all states of development from the smallest to the largest and ready to be expelled. The corpora lutea are the remains of the vesicles that have already burst and are undergoing atrophy and absorption. These graffian vesicles are composed of a capsule which is lined with a layer of nucleated cells. The fluid contained in these vesicles is albuminous and transparent, and it is in this fluid that the ovum is suspended.

**The Ova** are formed from the germ epithelium on the surface of the ovary by the cells becoming enlarged and sinking deeper into the stroma membrane which forms and surrounds them. They are cut off from the rest of the ovary, and the germ epithelium and the involution are contained in the cavity. These germ cells now form the ovum; the cell wall forms the membrane; the nucleus the germinal area; and a nucleus which appears on the germinal spot. A clear protoplasm is formed within the cell and constitutes the yolk and so the primordial cell is developed.



OVA SHOWING THE NUCLEUS AND NUCLEOLUS.

The graffian vesicles begin forming before the birth of a child and continue during the life of the female up to the close of the child-bearing period. At first these vesicles are small and



are not capable of impregnation; during the bearing period they become larger and are discharged more frequently. At puberty the ovaries enlarge and become more vascular. The graffian follicles develop more frequently and are capable of impregnation.

### THE DISCHARGE OF THE OVUM.

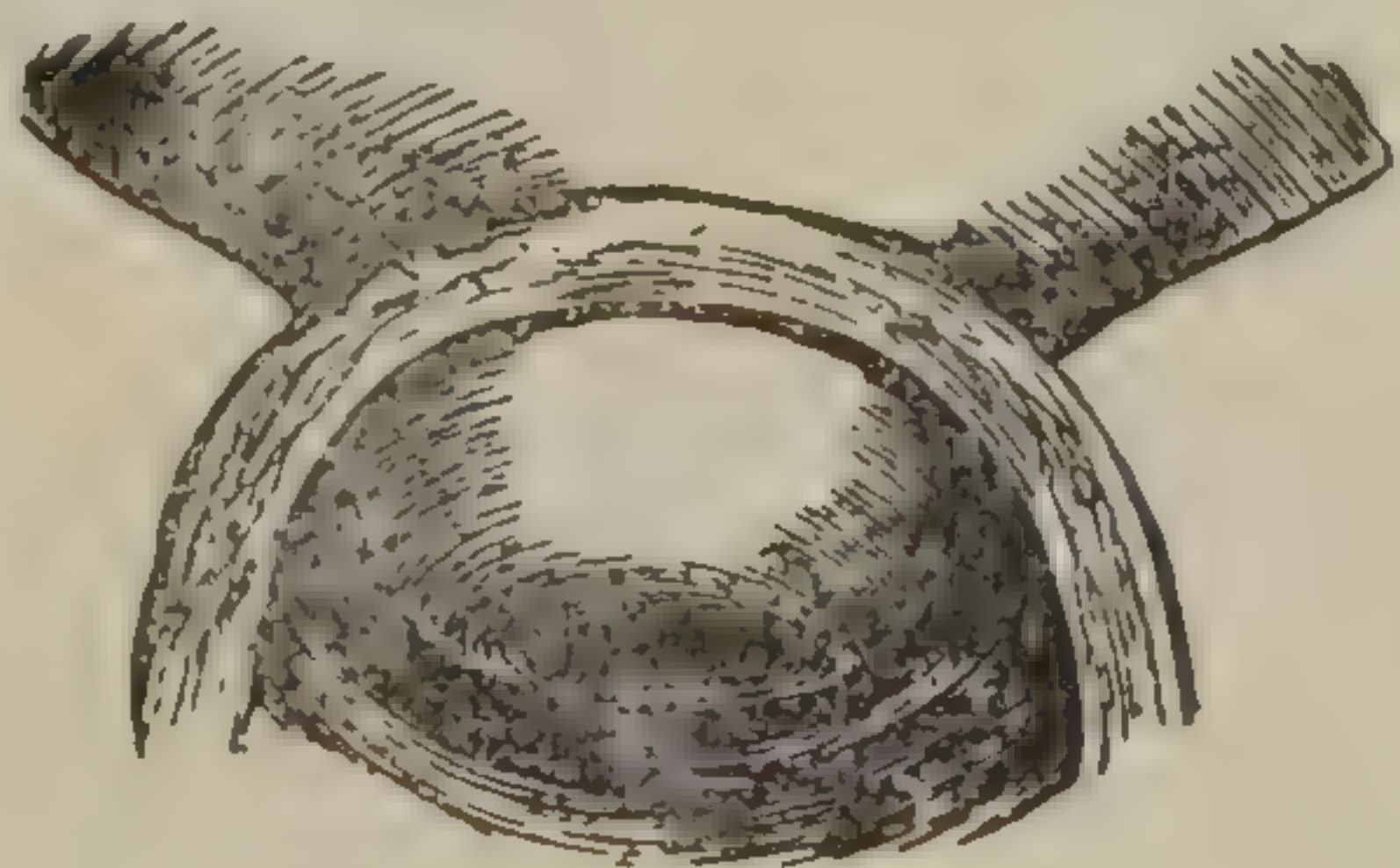
The graffian vesicles after gradually approaching the ovary burst; the ovum and its fluid contents escape and into the abdominal cavity, thence to the fallopian tube to the uterus.

Some authors claim that the fimbriated extremity grasps the ovary during the excitement of copulation and the ova is discharged at once into the tube.



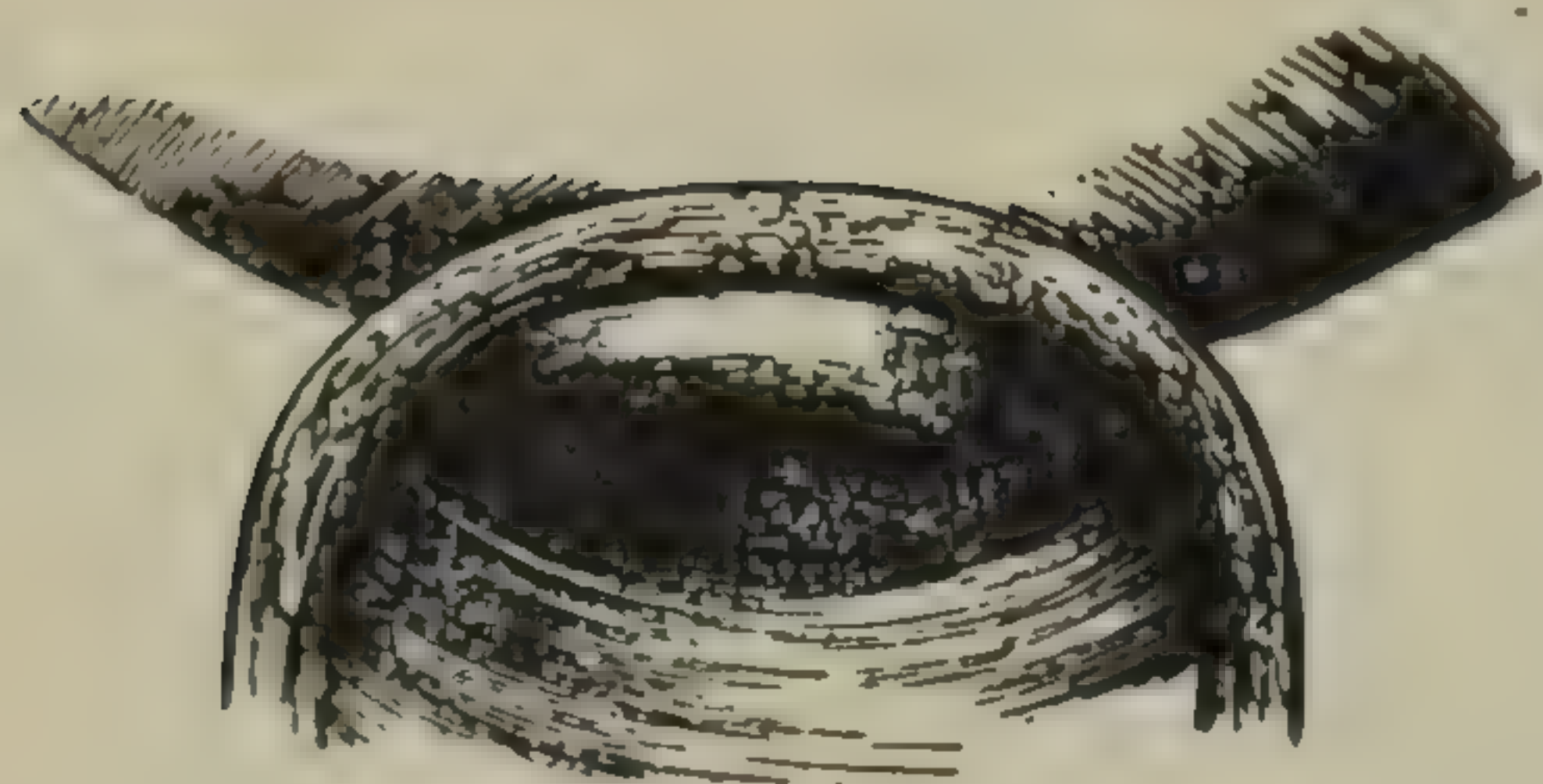
## SIGNS OF PREGNANCY.

The signs of pregnancy are of two kinds—those we can see and those of which the patient can tell us. The subjective signs are first, absence of menstruation; second, nausea and vomiting; third, salivation, (flowing of saliva from the mouth); fourth, nervous disorders, such as headache, toothache, irritability of bladder; fifth, enlargement of the breast with a crawling and tingling sensation, leucorrhœa and quickening, a movement felt by the mother and caused by the movements of the foetus in utero, dark lines on the abdomen and the areola of the breast. The value of any one of these signs is only a means toward an end in forming a diagnosis of pregnancy. Menstruation may stop for one and often for three or four weeks from cold, also in consumption it may cease early in the disease, but when a female has been regular and then misses for two or three months, and there be absence of tuberculosis and the regular flow ceases, with other signs, it points strongly toward pregnancy. The nausea and vomiting is sometimes present from stomach troubles and women with ovarian and other troubles of the uterus have nausea and vomiting. Salivation is not often present. Dryness of the mouth and sometimes a profuse flow of saliva occurs. Nervous disorders are common. The most frequent is neuralgia and toothache. Sometimes there will be incontinence of urine, (frequent urination). The enlargement of the breast is often present in tumors of the uterus and ovaries. The enlargement of the nipple and an increase of the dark pigment and the tissue around the nipple, called the areolar tissue, sometimes develop into little papules. These sometimes occur in ovarian and uterine diseases. Quickening of the foetal movements is often felt as early as the fourth month. It may be mistaken by the mother for movements of the intestines as they simulate it very much.

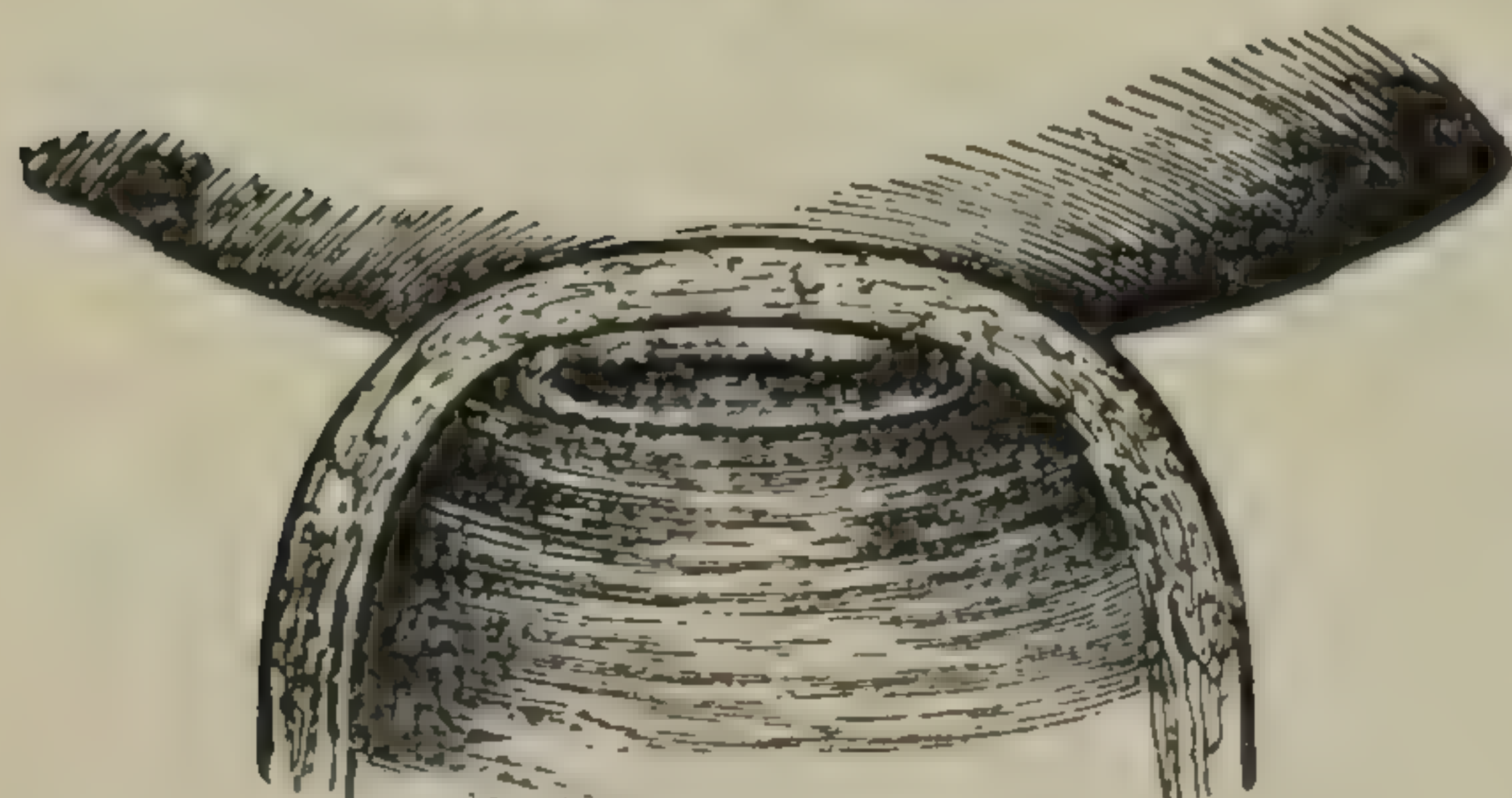


APPEARANCE OF THE NECK OF THE WOMB  
IN THE THIRD MONTH.

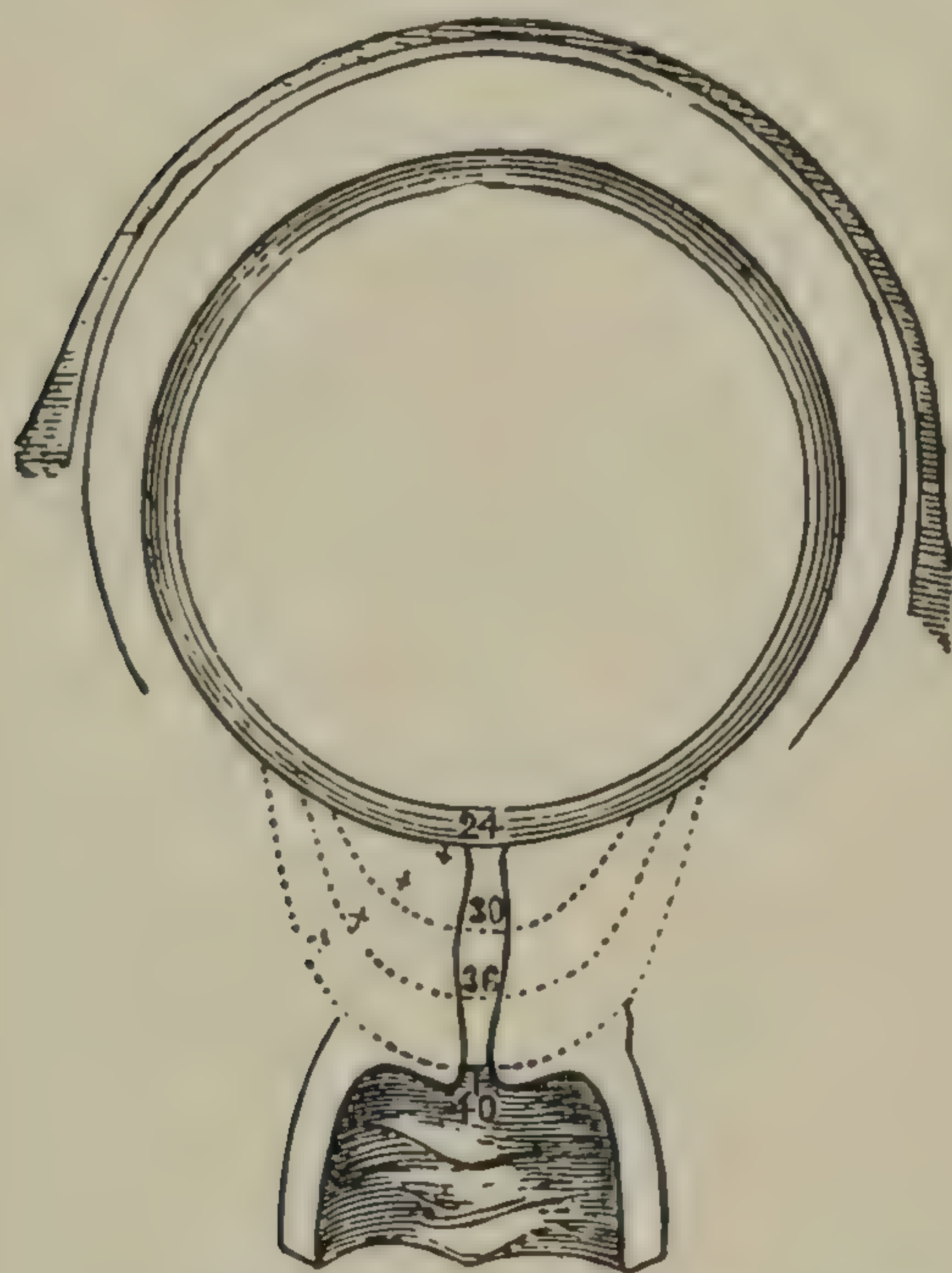




SEVENTH MONTH.



NINTH MONTH.

DIAGRAM SHOWING SHORTENING OF NECK  
ACCORDING TO TIME OF PREGNANCY.

One valuable sign of pregnancy is softening and shortening of the neck of the womb. Soon after impregnation takes place, the uterine cavity is filled up with the products of conception and that portion of the uterus that is extended into the vagina and forms the neck widens. This process of spreading of the body and absorption of the neck continues until the end of pregnancy. But this same condition also takes place in tumors of the uterus and therefore is not an infallible sign of pregnancy, but when all other signs are present it is easy to determine the length of and the probable time of delivery by the shortness of the neck of the womb.

### OTHER SIGNS.

The face of the patient will show marks or brown spots.

The abdomen increases in size and prominence, the

shoulders are thrown back, the woman being more erect.

The external genital organs are increased in size and swollen.

The breasts increase in size and the areolar tissue gets darker and pimples form around it.

The urine contains kystine, a substance resembling cheese.

The uterus rises higher in the abdomen after the second month.

The neck of the uterus shortens and becomes softer.



By ballotment the foetus is found to settle down on the examining finger.



Ovum of five weeks.

Hager's sign is the softening of the upper part of the uterus. It is felt by the abdominal and rectal touch.

Braxton Hick's sign: place the hand on the abdomen with sufficient force to bring it in contact with the uterus, and if pregnant the uterine contractions will be felt every five or ten minutes. This can be felt at the end of the third month.

Dr. Rasche's sign: introduce the two fingers into the vagina and the interior cul-de-sac, making outward counter-pressure above the pubes and if pregnancy be present, fluctuation will be felt. This is for the second month of pregnancy and with the changes in the areolar tissues is considered a certain sign of pregnancy.

The recognition of the foetus is made at the end of the sixth and at the beginning of the seventh month, a certain sign.

Movements of the foetus can be felt at the beginning of the sixth month and may be partial or all at one time. A certain sign of pregnancy. Only feeble children will not make them.

At five months the foetal heart can be heard and sounds like the tick of a watch heard through a pillow. This is a certain sign.

At from four to five months the uterine souffle can be heard by means of a stethoscope. It is caused by the passing of the foetal blood through the uterine arteries and resembles the wheezing of a distant bellows.

The only certain signs of pregnancy are the sounds of the foetal heart which beats at the rate of 120 to 160 per minute and the foetal movements and the recognition of the foetus. None of these can be distinguished before the last of the third and often not sooner than the fifth month.

**Death of the Foetus.**—Death of the foetus sometimes occurs. This condition is easily recognized after the third month. The symptoms will be failure to recognize the foetal heart beat and the absence of movements. The uterus ceases to grow and soon becomes flabby; the breasts decrease in size and become soft;



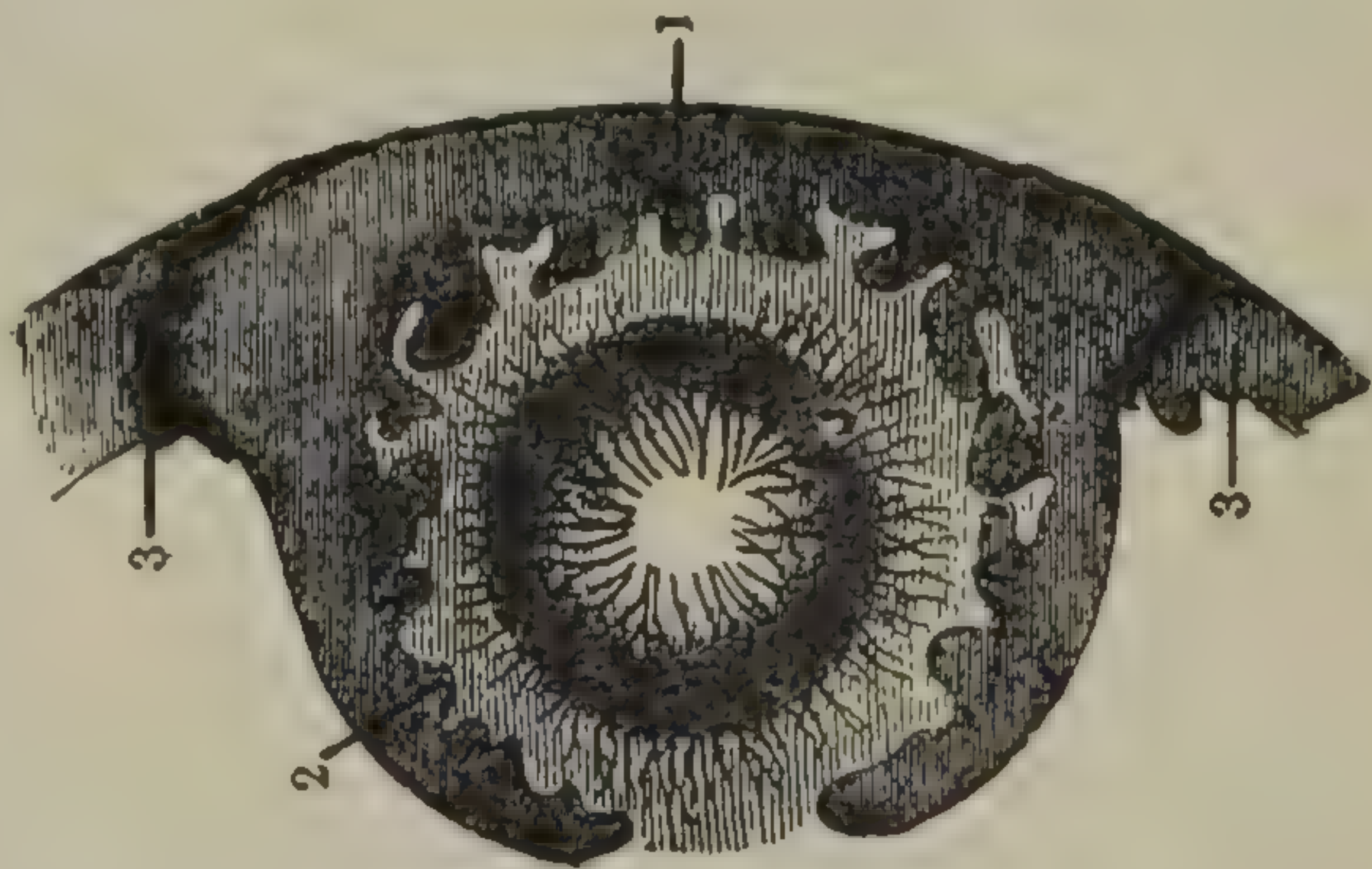
the patient will complain of being chilly. Her general health deteriorates and she will complain of a weight in the hypogastrium.

**The Attitude** is the position of the trunk and the position of the limbs with reference to it.

On account of being contained in a limited space and that space being of a rounded nature, the fœtus assumes a curved posture and the limbs and arms double in such a way as to occupy as little space as possible. This is called attitude by authors. That part of the fœtus which presents itself in the pelvic inlet is called the presentation of the fœtus. These positions sometime change from breech to head and the transverse changes to the normal position.

## EMBRYOLOGY.

Impregnation of the ovum usually takes place just previous to menstruation. But owing to the fact that both the male and female elements may remain in the genital passage for some days, if in a healthy condition, therefore it would be difficult to fix the exact time of impregnation. It is probable, however, that the graffian follicle is ruptured at a very early period of menstruation. The decidual membrane is in the most favorable condition to receive the fecundated ovum at that time.



THE DECIDUÆ MENSTUALIS, READY TO RECEIVE THE FECUNDATED OVULE.

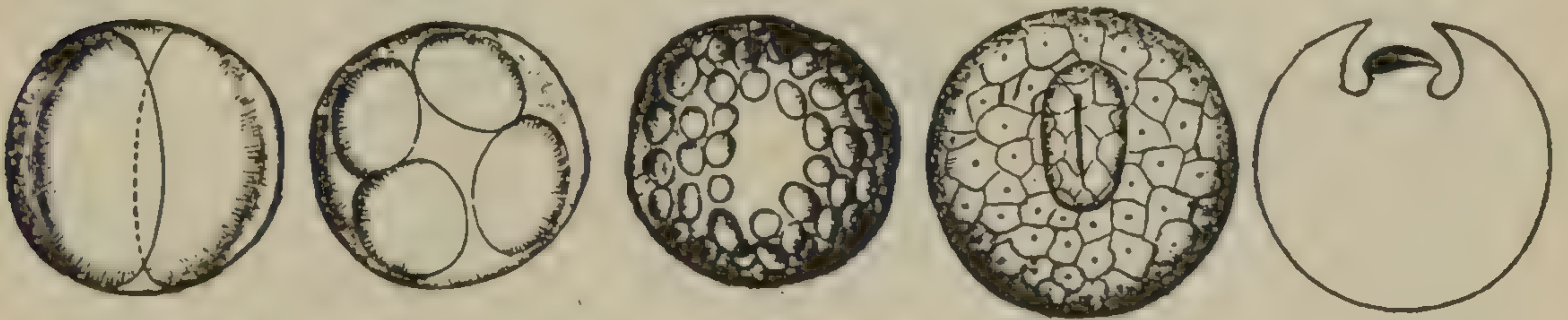
Coition is prohibited by a religious law of the Israelites for a week after the period, and they are a remarkably prolific race, this helping to prove that impregnation is most frequent just prior to the menstrual period.

Certain changes occur in the ovum before impregnation. The ovum leaving the ovary and while still in the fallopian tube, the nucleus spot disappears and the outline of the ovule becomes indistinct and elongated so that it is spindle-shaped. It is while in this condition that the spindle develops two or three vesicles which collectively form the female pronucleus.



## IMPREGNATION.

During coition, or sexual intercourse, the seminal fluid is forcibly thrown into the vagina, and the spermatozoa, by virtue of the vibratile movements, gradually works itself up through the neck and body of the uterus to the fallopian tubes, where it meets the ovum on its descent. The accepted theory is that fecundation takes place in the upper part of the tube. Impregnation of the ovum causes the following changes to take place. The head of a spermatozoan penetrates the vitelline membrane and enters the vitellus, and is surrounded by protoplasm. This is the male pronucleus. The male and female pro-nuclei join, and then follows a process of growth called segmentation. The primitive segmentation germ, or *blastophere*, is the first cell which is formed by the union of the male and the female pronuclei. As soon as fecundation takes place, the ovum receives an additional membrane or layer of clear albumen, which adds materially to its bulk. This is done while yet in the fallopian tubes and it corresponds to the white membrane of a hen's egg. Segmentation of the impreg-



SEGMENTATION OF THE OVUM IN THE IMPREGNATED EGG.

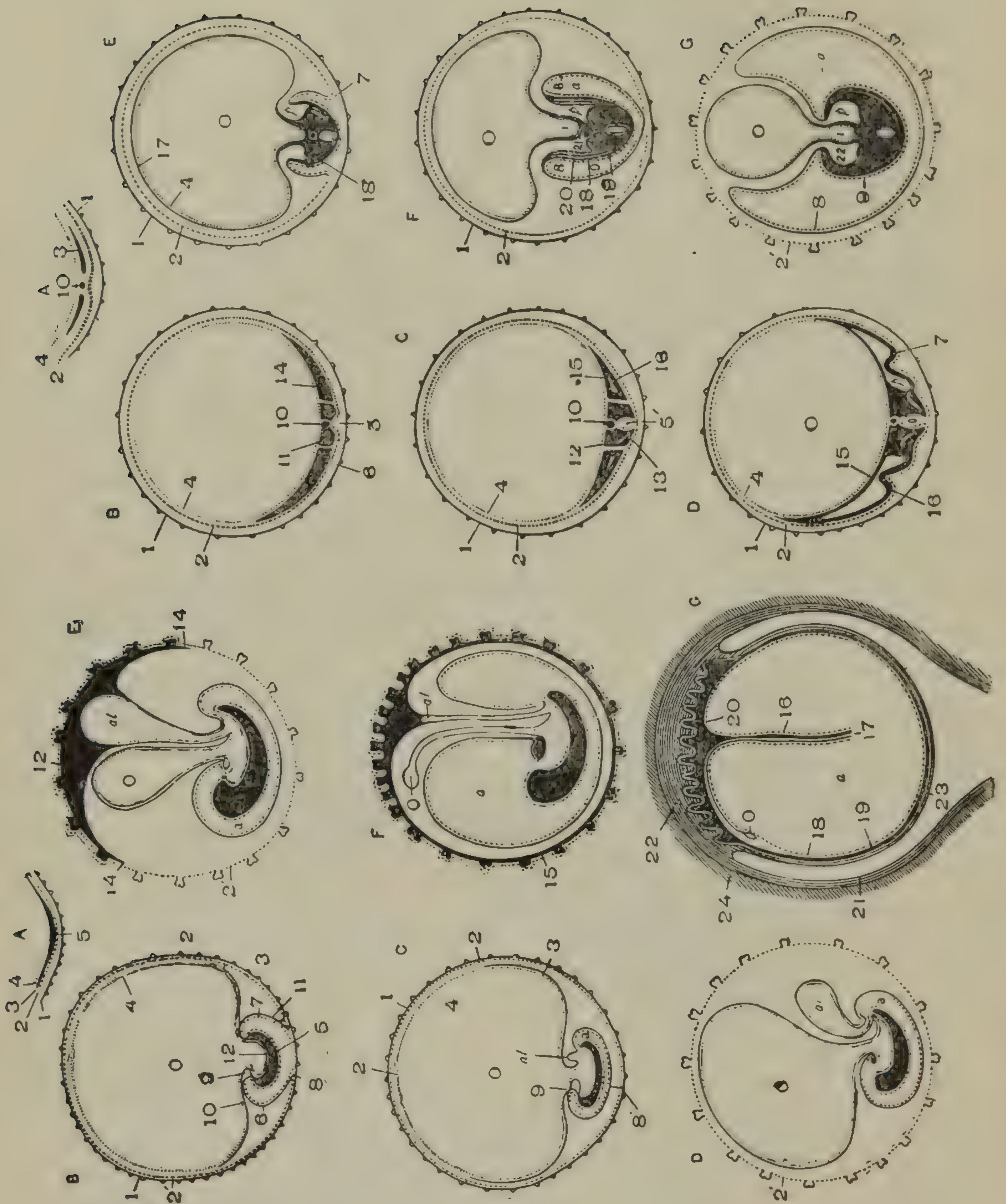
nated egg next takes place. It is a splitting-up process. The vitellus or yelk first divides in halves and then in quarters, then eighths, and so on until the vitellus becomes a mass of minute granular-looking cells.

The segmentation of the nucleus continues with the corresponding changes in the nucleus or yelk.

All this probably occurs in the fallopian tube, as it remains in the tube for eight or ten days.

The germinal membrane is the outer layer of the vitelline cells. They now become packed together and form what is called the zone pellucida, and hold in the central cavity the liquid of the vitellus. This outside membrane of the egg is called the blastorderm. The next change we have is what is known as the primitive trace. It is formed by proliferation of the cells of the blastorderm and forms at one place an opaque streak which grows in length and





#### EXPLANATION.

Fig. A. Blastoderm at right angles of the embryo, near middle, 8 hours after impregnation.

Fig. B. Same 24 hours after.

Fig. C. Same 36 hours after.

Fig. D. Same 48 hours after.

Fig. G. Same one week after.



breadth. About this time the blastoderm separates into three layers, the epiblast, mesoblast and hypoblast; along the axis of the primitive tube is formed a groove which develops into the cerebro-spinal axis brain and spinal cord.

The surface of the ovum becomes shaggy or roughened with the appearance of numerous villi, which are derived from the epiblast. This is known as the chorion.

The changes in the uterus that follow impregnation are a slightly increased blood supply. The decidua menstrualis is then called the decidua vera and is formed by proliferation of the sub-epithelial cells.

Into this decidua vera the impregnated ovum falls and the shaggy or roughened chorion implants its villi in the crypts of the mucous membrane. The decidua soon envelops that portion which is reflected over the ovum and it is called the decidua reflexa.

From rapid proliferation of the cells, the blastoderm increases in area, folds form at the sides, and longitudinally. These are of great importance, for it is in this way that the outline of the body is formed; the transverse folds forming the head and the feet, while the longitudinal folds form the outline of the body. The ridges of the epiblast, or the internal of three membranes, continue to thicken on both sides, and finally unite at the back, leaving a lining of cells within a tube. It is in these cells form the cerebral spinal axis. The head fold, gradually becomes constricted and forms the neck. In the meantime, the mesoblast, or middle layer, develops a number of processes which become the spinal column.

**Formation of the Peritoneal Cavity.**—The menoblast divides near the median line, and one part of the split menoblast adheres to the epiblast; the remainder joins the hypoblast and the included space becomes the peritoneal cavity.

The eye, ear, nose, skin, finger nails and the nerve centers are formed by the epiblast. The lungs, stomach, kidneys, liver, alimentary canal and the mucous membranes are developed from the hypoblast. The bones, muscles, faciæ, connective tissue, and the vascular system are developed from the mesoblast.

After the formation of the yolk sac, a blind pouch forms, which is called the umbilical vesicle. It is from this that the embryo derives its sustenance in the earlier stages. Blood vessels form early in the development and ramify over the umbilical vesicle and help to absorb its contents.



The layers of the somatoblast fold back until they meet and unite behind the embryo, and in this way they form a membrane which lines the ovum and one that encloses the embryo. This is called the amnion.

The amnion, in its earlier stages, is closely adherent to the embryo, but later becomes distended with a light pale fluid being composed of water and *vera* and which serve to float the foetus and also give it mechanical support. The other part of the amnion becomes very thin and adheres to the inferior extremity of the yolk sac, which is to become intestine, there buds a small mass that develops rapidly and fastens to the chorion layer. This is the allantois, which soon becomes very vascular and carries the blood vessels to the chorion. It nourishes the growing embryo. The chorion has by this time become developed, and tufted capillary loops, which become attached to the mother by the *decidua-vera*, as the vessels of the allantois develops and the embryo receives more nourishment. Through these the yolk sac, or umbilical vessels, become shrivelled and the substance becomes consumed. In developing the placenta, the glandular structure of the uterine membrane is increased and thickened; the follicles run deeply into the thick and succulent tissues. The chorion sends out little processes like the finger of a glove, which fit into these little follicles of the *decidua-vera* of the uterus.

The blood of the mother, it will be seen, does not enter into the blood of the foetus direct, but only comes in contact with the delicate membranes which make up the capillaries of the placenta. The foetal circulation will be given later. The mother's blood takes from the blood of the foetus, excrementitious matter and carbonic acid, while it in turn imparts oxygen. The placental circulation takes the place supplied in after life by the respiratory tracts and the alimentary canal.

**The Extremities** are formed from the somatoblast. They develop as buds which gradually become worked out. About the third month the separation of the fingers and the division of the extremity into joints is about completed. The arms are developed sooner than the legs and grow more rapidly in the earlier part of the uterine life.

There are two forms of circulation in the embryo: the vitelline and the placental. The former is that in which the vesicles



from the foetus pass over the yolk sac and carry nutrition to the growing organism. The placental circulation is that in which the maternal blood furnishes the elements of food.

**Circulation of the Blood in the Foetus or Placental Circulation.**—The blood returning from the placenta, after having received oxygen, and being freed from carbonic acid, is carried by the umbilical vein to the under surface of the liver; here a portion of it passes through the ductus venosus into the ascending vena cava, while the remainder flows through the liver, and passes into the vena cava by the hepatic veins. When the blood is emptied into the right auricle it is directed by the eustachian valve, through the foramen ovale, into the left auricle, thence into the left ventricle, and so into the aorta to all parts of the system. The venous blood returning from the head and upper extremities is emptied, by the superior vena cava, into the right auricle, from which it passes into the right ventricle, and thence into the pulmonary artery. Owing to the condition of the lung, only a small portion flows through the pulmonary capillaries, the greater part passing through the ductus arteriosus, which opens into the aorta at a point below the origin of the carotid and sub-clavian arteries. The mixed blood now passes down the aorta, to supply the lower extremities, but a portion of it is directed, by the hypogastric arteries to the placenta to be again oxygenated.

At birth, the placental circulation gives way to the circulation of the adult. As soon as the child begins to breathe, the lungs expand, blood flows freely through the pulmonary capillaries, and the ductus arteriosus begins to contract. The foramen ovale closes about the tenth day. The umbilical vein, the ductus venosus, and the hypogastric arteries become impervious in several days, and ultimately form rounded cords.

**The Formation of the Ear.**—Very early in the life of the embryo there is a depression on both sides of the head. The mass of epiblast separates and forms the epithelium of the vestibule. The surrounding epiblast forms the bony structure; the auditory nerve is developed, with the other cranial nerves, and grows into its organs by and from its central origin.

**The Nose.**—The nasal fossa is a depression in the superficial epiblast. It widens and receives the nerve filaments from the



olfactory lobe. The primary olfactory depression continues to widen and soon the growth of the superior submaxillary bone shuts it off.

**The Lungs.**—The first appearance of the lungs is like a small bud, which is at the junction of the pharynx and the larynx (?) and œsophagus, and soon forms a separate tube. The tarchea and the hypoblast extend into the surrounding mesoblast and, from this structure the tissues of the lungs is formed.

**The Wolfian Body and Organs of Generation.**—It is from the wolfian body that the genito-urinary organs are developed. As early as the third week there is a rounded body, an increase of the cells of the mesoblast. Just inside of its division of the parietal layers, and on each side of the spinal column it consists of three parts. The first and largest of these is the wolfian body, and is not a permanent structure. The second lying above, develops the internal organs of generation, and the third is the rudimentary kidney.

About the sixth week of foetal life the kidneys begin to grow and a duct to carry the urine, thus the ureter is formed.

**The Testicle and the Ovary**—These two organs originate from the germinal epithelium. This body appears on the inner side of the wolfian body and is the nucleus of the future testicle or ovary as the child is male or female. From the inner side there appears a duct called Miller's, which passes down the lower end of the third gut. At first sight it is very hard to tell the sex of the foetus. The ducts of Miller join to form the foetal uterus, fallopian tubes and the vagina in the female.

### HERMAPHRODITISM.

In both sexes in early foetal life the external genitals are alike, consisting of a body greatly resembling a penis with a fold of skin at either side. In the male there is a groove on the under surface, which unites and forms the urethra. The scrotum is formed by the skin at the sides. In the female this body becomes smaller and forms the clitoris. Both of these conditions may persist in adult life and form what is known as hermaphroditism.

The following table shows the size of the foetus at the different stages of intra-uterine life :



SIZE OF FŒTUS AT DIFFERENT PERIODS.

Ovum at twelfth day measures.....	1-5th of an inch
Ovum at fifteenth day measures.....	1-12th of an inch
Ovum at twentieth day measures .....	1-8th of an inch
Ovum at twenty-first day measures .....	1-6th of an inch •
At the end of 1 month .....	1×1= 4-9 inches
At the end of 2 months .....	2×2= 1 7-9 inches
At the end of 3 months .....	3×3= 4 inches
At the end of 4 months .....	4×4= 7 1-9 inches
At the end of 5 months .....	5×5=11 1-9 inches
At the end of 6 months .....	6×5=13 1-9 inches
At the end of 7 months .....	7×5=15 5-9 inches
At the end of 8 months .....	8×5=17 7-9 inches
At the end of 9 months .....	9×5=20 inches
At the end of 10 months .....	10×5=22 2-9 inches



MEMBRANES AND FŒTUS, SHOWING POSITIONS AND ATTACHMENT OF THE PLACENTA.



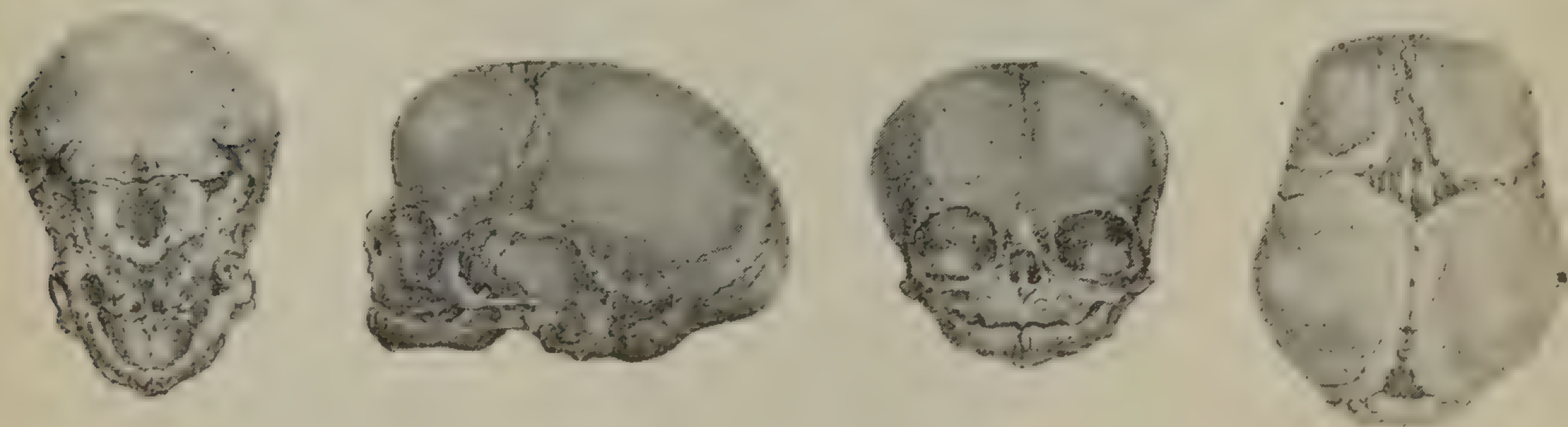
## PARTURITION.

The foetus is expelled from the uterus by the contractions of the uterus and the abdominal walls. The uterine contractions first appear, and it is not until the foetus has entered into the vagina that the abdominal muscles are brought into play.

## FCETAL HEAD.

The foetal head is divided into the head and the cranium. The cranium is divided into the vault and the base of the skull. The former can be compressed, but the latter cannot. The bones of the cranium are peculiar in that they are compressible and are loosely united by cartilage, and are very flexible on account of being completely ossified. This allows the brain and the cranial cavity to become smaller in its passage through the birth canal during parturition.

The head is also divided into sutures, which have been given names by which they can be located by obstetricians. They are the sagital, from front to back ; the fronto-parietal, which is sometimes called the coronal suture—this extends from the front of the parietal bone to the occipital bone ; the lamdoidal suture



or the occipital parietal, as its name signifies, is the suture formed by the junction of the occipital and parietal bones. The fontanelles are the two openings in front and back where ossification is not complete, and receives the name anterior or posterior, according to their location. The diameters of the head are the transverse, vertical and the antero-posterior.



The maximum diameter extends from a point on the chin to a point on the sagittal suture between the fontanelles. It measures five and a half inches. The occipital mental extends from the superior angle of the occiput to the chin and measures five and a half inches.

The **Occipital Frontal**, from the root of the nose to the superior angle of the occiput, and measures four and three-fourths inches.

**Sub-occipital Bregmatic**, from the middle of the bregma to the union of the occiput with the neck, and measures three and three-fourths inches.

**Bi-parietal**, between the two parietal bones ; measures three and three-fourths inches.

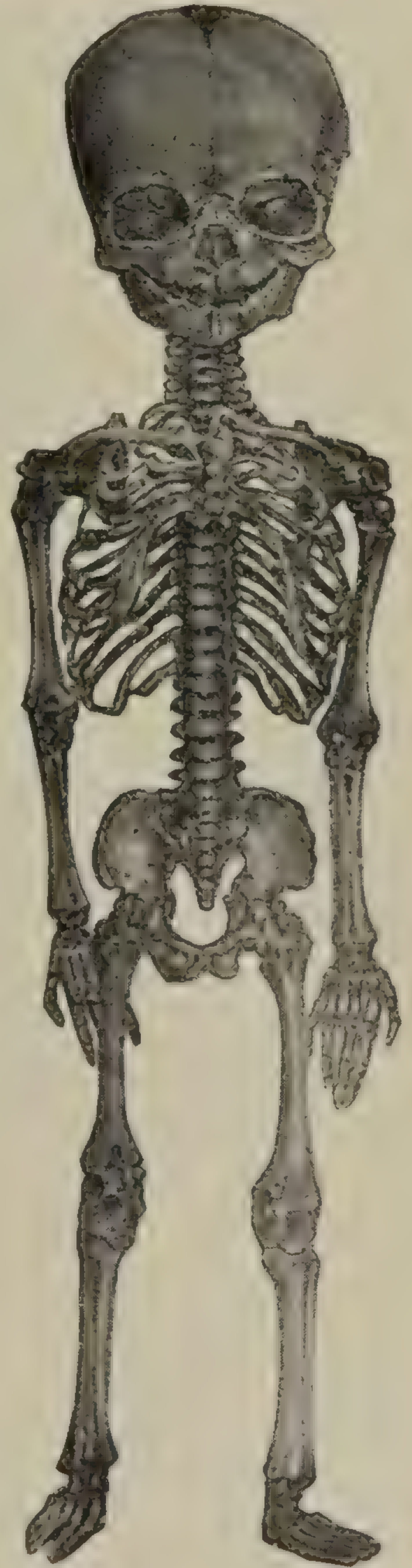
**Fronto-Mental**, between the top of the forehead and the chin, measures three and one-fifteenth inches.

The entire circumference of the foetal head measures fourteen and one-half inches. The smaller circumference measures twelve and one-fourth inches. During labor any or all of these measurements are subject to changes, as they come into contact with the hard bony surface of the pelvis cavity and in the different presentations of the head.

The **Trunk** is also divided into the bis-acrominal and the dorso sternal, three-sevenths inches; the bis-trocanteric, three-fifths inches.

**The Attitude and Presentation of the Foetus.**—If the head of the foetus can be felt through the os it will be found that the bones of the head are movable and loose.

**The Duration of Pregnancy.**—It is impossible to tell the exact date of conception, and the length and duration can only be approximated (unless we can know the exact moment of con-



SKELETON OF FŒTUS.



ception) fecundation it will be safe to count that there will be two hundred and seventy-eight days between the end of menstruation and the beginning of labor, and two hundred and seventy-five days between insemination and labor.

**The Date of Confinement** is calculated by counting nine calendar months from the cessation of the flow and adding five days and then counting back three months.

**Precocious Births** are those occurring before the time of viability, the children being born strong and continuing to live.

**Prolonged Pregnancy** is pregnancy continued beyond the usual period, the foetus being born alive. The laws differ in different countries, but in this it recognizes as legitimate, a pregnancy prolonged up to three hundred and seventeen days. A missed labor is labor in which the foetus is dead and the labor is prolonged beyond the usual period.

## TWINS.

**Twin or Multiple Pregnancies.**—In order to have multiple pregnancies it is necessary to have two ovules in one sac, or two ovules come from one or both ovaries, or one ovule may contain two germs, or the germ itself may divide into two germs.

Twins occurs once in ninety pregnancies. Triplets once in 7,000, quadruplets once in 370,000. There have never been more than five children born at one birth and lived, and there is but one case of miscarriage on record with six foetuses, it having occurred in Italian-Switzerland.

**The Causes of Multiple Pregnancies** are climate, race, stature, great development of the ovaries, heredity and multiparity.

**Super-fecundation** is the successful and successive fecundation of two or more ovules, and is not simultaneous.

**Superfoetation** is that condition in which the conception has occurred and the uterus, being already occupied with a foetus, a second impregnation occurs from a subsequent coitus, as when twins are born of different parentage, one black and the other a light mulatto, as has been found in cases where two ova of the same parentage at different stages of development, one in the uterus, the other in a different portion of the genital tract. These cases are explicable by successive coitions by the same or different fathers.

In twin pregnancies, if the fecundation is of different ovules,



there is no vascular connection between the placenta, and each foetus has a separate chorion and amnion, and, at first, each has its own independent decidua, but later the intervening part is absorbed, leaving but one. However, if pregnancy results from the fecundation of a single ovule, containing two germs or even a single germ, the latter divides into two, then there is but a single placenta and the blood vessels communicate. But if there is a single chorion, each foetus will have its own amnion. As a rule, twins are developed from the same ovum and are of the same gender or sex. When twins are born the weight of each child is less than when a single child is born. Multiple pregnancies seldom go to full term on account of the over-distention of the uterus.

Or one of the foetuses may die and become expelled and the other go to term. Sometimes the dead foetus is retained in the uterus and undergoes changes and is absorbed. Often it is incorporated in the living foetus, and in the after life of the twin this dead foetus may take on new life and grow, forming what is known as cyst or tumor. Triplets rarely ever go to term ; quadruplets, never.

The diagnosis of multiple pregnancies can only be told by the hearing of two foetal hearts, and by the largeness of the abdomen and its irregularity in shape, the more frequent foetal movements and the disorders of pregnancy being exaggerated. By touch we can find the foetal members at different parts of the uterus, and by pressing on the abdomen the presence of two foetal heads may be discovered, and we may also discover the furrow existing between them often before the bag of waters has been broken.

#### DISEASES AND COMPLICATIONS OF PREGNANCY— NAUSEA AND VOMITING.

This is caused by diseases of the cervix or neck of the uterus. Positional disorders of the uterus in the foetus and the position of the uterus, also stretching of the uterus by the growing germ. As a rule, as long as the food is properly digested and the general health remains good, nothing should be done, as these symptoms usually disappear along about the fourth month.

**The treatment** of simple morning sickness should be hygienic and medicinal. Hygienic treatment should be directed to watch-



ing the diet. If solid food is found to increase the vomiting, a light and easily digested food at short intervals should be taken.

A desire for any especial article of food should be satisfied and the article given. Sometimes a rest from intercourse, or a change of scene, such as sending the patient away on a visit, has been found to give relief. Breakfast taken in bed a couple of hours before arising, champagne, ice or lime water, a cup of hot coffee or tea, and iced milk are sometimes found useful in relieving nausea when taken before rising in the mornings.

**The medical treatment** is intended to keep the bowels regulated by such mild remedies as senna, cascara sagrada, in small doses; carbonate of magnesia, or soda phosphas, in one or two ounce doses, dissolved in water, or the tartrate of potassa and soda (Rochelle salts), in doses of ten grains to a half teaspoonful in half a glass of water, taken two or three times daily, give good results. The following remedies have been recommended and used with some degree of success: Fowler's solution of arsenic, two or three drops after meals; wine of ipecacuana, in drop doses given every hour. Carbonic acid water, cocaine or the wine of cocoa and the digestive ferments, such as ingluvine or pepsin, in five or ten grain doses, mixed with the food and given in small quantities, often repeated, with or without menthol in ten grain doses, furnishes the most rational method of treating this troublesome symptom of pregnancy.

The local treatment consists in painting of the cervix, or neck of the uterus with a solution of nitrate of silver ten grains to an ounce of water, followed by a glycerine tampon, composed of cotton saturated with glycerine; this being repeated every two or three days. Or tincture of iodine and carbolic acid, painted in the same way; also suppositories, composed of morphine or belladonna, and inserted high into the vagina, have each been tried with some degree of success; but every remedy should be tried that offers any prospect of relief before the question of interrupting pregnancy should be considered.

When the uterus is retroflexed or retroverted, it should be replaced and kept in position by pessaries or plugs of cotton in the form of glycerine tampons, also soaked in glycerine. Sometimes leeches applied to the neck of the womb may give relief. Frequently it will be found necessary to dilate the cervical canal. This can be accomplished by the aid of the fingers or an instrument made for the purpose, but care should be taken not to dilate



too freely, as abortion may result. But this should never be done except at the advice of a reputable physician.

**Hyperemesis**—Uncontrollable, obstinate and pernicious vomiting of pregnancy is called hyperemesis. It occurs about the beginning of the third month. The symptoms are mild attacks of vomiting, gradually increasing and getting worse; about the last of the third month the vomiting gets more serious, nausea becomes more and more constant, the vomiting is almost incessant, and will be found to be composed of mucus mixed with the food and bile; in some cases it is composed of pure bile. This incessant vomiting causes gastric pains and fatigue, the patient becoming feverish, and as the disease advances, the patient continually loses flesh, and all of the symptoms are increased. The extremities become cold, the skin of the face and trunk becomes more hot and dry, the throat, mouth and tongue dry, and the stomach rejects everything taken into it. The urine is scanty, and diarrhœa becomes a constant symptom. There will be great emaciation, the patient becomes delirious, the pulse is small and thin; spontaneous abortion and the death of the foetus occur at this time; also, death almost invariably results to the mother.

**Treatment** consists in supporting the patient with nourishing enemata of beef tea, until the stomach will retain food, then begin with tincture of opium and brandy every two hours, and continue until solid food can be retained. Defibrinated blood, white of an egg in water, peptonized milk and animal broths, is the best as nourishment. For the great thirst give the white of two eggs in about six ounces of water, as an injection into the rectum.

Never give more than six ounces of any kind of enema as it will be easier retained by the rectum. As soon as the stomach will retain them, give milk and lime water, also cocoa and milk, or peptonized milk; but if the vomiting should continue, the only remedy will be to induce abortion or premature labor. Neither operation should be done without a consultation of physicians. Death in many cases is caused by delaying this operation.

**Oedema, Varicose Veins, or Milk Leg**, are diseases that occur sometimes as a complication of labor. They are caused by the pressure of the foetal head upon the larger veins of the trunk of the mother. This pressure, when continued for a long time, causes disease of the valves in the veins and the blood does not return as it should, which will in time cause a fulness of the veins, sometimes



amounting to stagnation and ulceration. The treatment consists in keeping the patient in a recumbent position, and a flannel bandage or an elastic stocking should be applied to the limbs. Great care should be taken not to apply the bandage or stocking too tight as it will sometimes cause rupture of the veins as well as abortion or premature labor.

**To Treat a Ruptured Vein**—A compress should be made by folding a piece of rag and applying it tightly over the seat of the rupture with a compressing bandage. If this does not give relief, the proper thing to do will be to carry a needle below the bleeding vessel, and a figure of eight ligature carried around it (wrapping the thread around the needle), thus causing direct compression.

**Thrombus** is a hemorrhage beneath the skin caused by the rupture of a blood vessel, and should be treated by the application of cold dressings and rest. Varicose veins of the vulva should be treated the same as elsewhere, by the recumbent position and an abdominal bandage to correct any misplacements of the abdomen and to give support to the uterus.

**Dropsy, or Odema**, is an accumulation of fluid beneath the skin caused by the same conditions as varicose veins and from diseases of the heart or kidneys, the treatment consists of rest in the recumbent position with the limbs slightly elevated. All restrictions should be removed and the parts bathed in cold water several times daily. When the skin becomes tight and position will not relieve, diaphoretics and tonics should be administered. Small doses of tincture of digitalis in from one to three drops given in a little water repeated every four hours will soon give relief. The distilled concentrated extract of witch hazel applied with cloths and rubbed on several times daily is highly recommended by eclectic and homœopathic physicians.

**Relaxation of the Pelvic Joints**—This is a condition that sometimes exists as a complication of pregnancy. It is caused by, and is due to absorption of the fibrous substance during pregnancy, or a deposit of elastic tissue in the cartilages of the pelvic articulations. Treatment is rest, and is best taken by keeping the patient in bed during pregnancy. Efforts to walk or take exercise are followed by injurious results. The patient should remain in bed for at least six weeks or two months after confinement. In order to secure immobility of the joints a bandage composed of stout muslin or a



hip binder should be worn at any attempt to walk or get out of bed. Frequently the relaxation will be so complete as to require the joints to be supported by a metallic girdle.

## DISEASES OF THE ORGANS OF GENERATION.

**Pruritus**, vegetations of the vulva, leucorrhoea and displacements of the gravid uterus.

**Pruritis Vulva** is an itching of the external genital organs and is caused by irritating discharges of different kinds ; the result of malignant disease of the uterus, ulceration of the cervix and inflammation of the uterus and vagina.

It is sometimes caused by diabetes melitus herpes and eczema purigo, and follicular inflammations, menstruation, and pregnancy, by causing congestion of the genitals.

**Treatment** consists in removing the cause, if possible, which can be done by thorough cleanliness, by the use of hot and cold sponging, sitz baths and local anasthetics, such as the application of a 5 per cent. solution of cocaine to the affected part.

If the pruritis depends upon the discharge from a vaginitis, astringent applications should be used, such as alum wash, two or three grains to the ounce of water or the acetate of lead in the same proportions used the same way by injections into the vagina and repeated every three or four hours for the first day, then less often. Sometimes a tampon of boracic acid can be applied with good results. It is made by taking the ordinary absorbent cotton as it comes from the stores and saturating it in glycerine and then covering it with the pulverized boracic acid and inserting high into the vagina and letting remain for ten or fifteen hours.

For cervical catarrh the same treatment can be used except that the cervix should be painted with a solution of nitrate of silver thirty or forty grains to the ounce of water and applied to the cervix every third or fourth day. This application should be watched and always followed each time with the glycerine tampon. The general treatment as used by practitioners, consists in using the corrosive sublimate wash composed of seven grains to the quart of water and painting of the muriate of cocaine. Five to ten per cent. solution to the affected part. This should be repeated as often as the effect of the cocaine ceases. Ointments of iodoform and the oxide of zinc are very useful after, being all that is necessary.



To secure rest at night, the use of the bromide of potassa, ten to twenty grains at bed time, or laudanum twenty or thirty drops at bed time, have been tried with some degree of success in this affection.

**The Vegetations** should receive a general treatment by such constitutional remedies as potassa iodide in five or ten grain doses, or the compound syrup of stillingæ in teaspoonful doses, three times a day, with a good generous diet.

Locally, the growths can be painted with a solution of acetic acid repeated mornings and evenings until inflammation sets in. It should then be discontinued, when they will slough off.

**Leucorrhœa** is a discharge of pus mixed with mucus, and sometimes blood. It is a symptom of diseases of the uterus or vagina.

When the disease is slight the use of the mild astringents, such as the acetate of lead zinc, alum, and borax, carbolic acid, chlorate of potassium, and the common table salt will give relief ; but if it be excessive or irritation of the genitals occur, the use of dry tampons will be required. They can be used as a plain cotton, or they can be medicated with astringents such as alum and borax, or they can be composed of a solution of common tea or glycerine and boracic acid. Tampons are used with advantage, and should be removed every day and fresh ones applied. If the leucorrhœa be specific (gonorrhœa) it should receive prompt treatment by a physician. A solution of corrosive sublimate one to one thousand, and the whole surface of the vagina thoroughly washed with a fountain or household syringe is the best for this purpose. Should this fail to stop the inflammation, the vaginal walls should be painted with a solution of nitrate of silver of the strength of thirty to fifty grains to the ounce of water.

## DISPLACEMENTS OF THE UTERUS.

Up until the fourth month of pregnancy, the uterus is liable to become misplaced from relaxation of the broad and the round ligaments. When this occurs the treatment should be to support by means of pessaries ; the hodge being the best. Position will often restore the uterus to its natural position when pessaries can not be worn. Tampons or pledgets of cotton can be placed high into the vagina in such a manner as to give support ; but



when the uterus is misplaced and protrudes from the body, the only treatment that will be of service is support from a bandage. The T bandage is the one usually selected. It is made by using a bandage of good stout muslin passed around the waist as low down as will be comfortable, and then another piece stitched to the back or front, and the other end drawn up tight enough to give the support desired. The loose end pinned back or in front as the case may be. These misplacements get well about the fourth month without any treatment. After labor the patient should be kept in bed for at least six weeks.

**Anterior Displacements** are seldom met with, and it is seldom that the uterus becomes incarcerated. In multiple pregnancies, the uterus is nearly always anteverted on account of the relaxation of the abdominal walls. In moderate anteversion there are no marked symptoms, but when it becomes more marked there is constipation, irritability of the bladder and pains in the sacral region.

**In Treating:** The bowels should be well regulated, and the patient kept in bed and lying on the back mostly, and in the latter months of pregnancy a bandage or abdominal support should be worn to give support to the uterus.

**Retroversion** is not a frequent complication of pregnancy because the uterus spontaneously rises into the abdominal cavity, and while it remains below the promontory of the sacrum the cervix bends upon itself, and we have as a result retroflexion. If the retroversion rises into the abdominal cavity the pregnancy will continue to term. But as a result of inflammation of the uterus, abortion may result or the uterus may become incarcerated.

**To Treat It** the bowels should be kept regular, and at the same time see that there is no accumulation of urine. Any straining at stool should be avoided. Be sure that there is no compression around the waist. The patient should lay in bed on the side and never upon the back. If the uterus is movable there should be gradual attempts made to restore the uterus to its natural position, by the patient assuming the knee-chest position, and the physician introducing two fingers into the vagina or the rectum, and then making gentle pressure upon the fundus of the uterus. After the uterus has been restored to the normal position the patient should wear a pessary.

**Incarceration** is that condition of impaction of the uterus



under the sacral bone. The symptoms are incontinence and retention of urine, severe pains in the lumbar and sacral region, with constipation and painful defecation, œdema or dropsy of the arms and legs, pain and bearing down in the pelvic regions. Peritonitis and uræmia follow the neglect of proper treatment. Impaction results in abortion and restitution, the uterus righting itself. Retention of urine and inflammation of the bladder are the most frequent symptoms associated with constipation and inability to empty the bowels. Death sometimes results from perforation of the bladder and metritis. Uræmical poisoning, gangrene and peritonitis, as a result of retention of urine. The mucous membrane of the bladder sloughs off in six days ; perforation occurs in ten days.

**Treatment.**—The bladder and the bowels should be attended to, and the urine, if necessary, should be drawn with a catheter to replace the uterus ; and if the uterus is bound down by adhesions, abortion offers the only means of saving the life of the mother.

An attempt should always be made to restore the uterus to the normal position by the knee-chest position we spoke of. Some authors recommend the use of Barnes' dilators placed into the cervix and then filled with water. They should remain for three or four hours and then be emptied so as to allow the woman to evacuate the bladder. By this method it will require but twenty-four hours to replace the uterus. After restitution, the patient should wear a pessary and relapse will hardly recur.

## DISEASES OF THE OVUM.

**Hydatiform Mole**, mixomatous degeneration of the placenta, is a disease of the chorial villi (membrane of the foetus), the investing epithelium of the villi and their contents undergo hypertrophy mucoid degeneration. These cysts are of many different shapes and resemble in size a millet seed, but vary to the size of an English walnut. The pedical of these cysts resemble Wharton's jelly of the umbilical cord, and are composed of albumen and mucein, which resemble the liquor amnii.

When the disease forms before the second month, the degeneration involves the entire surface of the chorion, and death of the



embryo is the result. The vessels of the villi become obliterated and the foetus becomes absorbed.

When the disease forms after the placenta has begun to grow, it will be limited to the placental part of the chorion; but sometimes cysts will be found in other parts of the ovum. When the disease is sufficient to destroy the foetus it will be found in the amnion cavity. When but a part of the chorion is involved the foetus may go to term, but it is possible for the uterus to contain both a healthy foetus and a hydatid at the same time. Retention of the placenta, or rupture of the uterus may occur from the degenerated villi penetrating into the uterine sinuses.

The symptoms of hydatid cyst are attacks of hemorrhage, of a muco-purulent discharge, rapid enlargement of the abdomen, expulsion of the vesicles, obscure fluctuations and a doughy feel of the uterus. The foetal members can not be recognized on palpitation, and there will be lumbar and sacral pains. The lower segment of the uterus is tense, and the foetal heart can not be heard; the only certain symptom is the discharge of the vesicles. The danger to the mother is from hemorrhage. The foetus in nearly all cases dies.

**Treatment.**—In slight cases of hemorrhage the treatment is to give cold drinks and the tincture of opium in twenty to twenty-five-drop doses. The patient should then be put to bed. When there is a greater amount of hemorrhage give fluid extract of ergot and introduce a tampon. In case of a return of the hemorrhage, dilating the cervical canal and emptying the uterus is the best treatment. The dilation is best accomplished by a Harvey dressing forceps, or a dilator made for the purpose; and when the uterus is emptied, use a wash of the corrosive sublimate, one part to the 2500. In case of hemorrhage after the uterus is emptied, the proper thing to do is to scrape out the uterus with a dull curet or the injection of a strong solution of alum water to the inner surface of the womb, or fluid extract of ergot, administered in doses of one teaspoonful every three or four hours until the uterus is firmly contracted. Keep the patient in bed for three weeks.

**Pollyhydra Amnios** is an excess of the liquor amnii (the water that is found in the uterus during pregnancy). It is supposed to be due to an increased activity of the kidneys, diseases of the foetus, changes in the maternal circulation. Syphilis is a frequent cause. It occurs more frequently in the multigravida



than in the primigravida. It is of two forms—the acute and chronic.

**The Symptoms** are a rapid development of the uterus. The foetus can not be recognized by palpitation ; the cervix is shortened and high up ; the foetus moves about with great ease ; the walls of the uterus are tense and easily fluctuate ; the patient complains of being short of breath, palpitation of the heart, abdominal pains and irritability of the stomach, dropsy of the lower limbs, and pains in the hips and abdomen. These symptoms occur about the fifth month, and in some cases earlier. In the chronic form, the accumulation occurs gradually, while in the acute, it may occur in a few days. Prognosis is very grave for the child, as nearly one-fourth die. To the mother it is not so grave ; the only danger is from post-partum hemorrhage and heart affections.

**Treatment.**—Whenever there is a disturbance of the mother's heart, the treatment should be to puncture the membranes high up and use the hand as a plug so as not to get too free and sudden evacuation ; then let the case go to term, if possible ; but where necessary to save the mother, it is best to induce abortion or premature labor and guard against post-partum hemorrhage.

## ABORTION.

Abortion is the expulsion of the product of conception before the time the foetus is viable. The term abortion is used when the ovum is expelled during the first three months, or after the third month ; up to viability the term miscarriage is used. Abortion is divided into ovular, during the first three weeks ; embryonic, up to the fourth month ; foetal, after the fourth month. Abortion is classified into spontaneous and artificial, and subdivided into therapeutic and criminal.

**Incomplete abortion** is the expulsion of the foetus without the membranes or the placenta.

**Missed abortion** is where the foetus dies and is not expelled within two weeks.

**Abortions** usually occur within the first three months, if spontaneous, and at a time corresponding to a menstrual period. Criminal abortion usually occurs from the third to the sixth month.

There are three causes for abortion : Paternal, maternal and ovular.

**Paternal** causes are syphilis, alcoholism, sexual excesses, ex-



hausting diseases, working in sulphur, lead poisoning, old age, or extreme youth.

**Maternal** causes are external and internal. The external are tight corsets, violent exercise, coition, hot vaginal baths and injections. Accidental or intentional, traumatism, surgical operations, and a high altitude.

**Internal** causes are high temperature, hemorrhagic, endometritis, infection of the foetus, infectious and chronic diseases, especially syphilis.

The uterine causes are structural disorders and displacements of the uterus, endometritis.

Other causes are pelvic adhesions, tumors, organic diseases of the kidneys, lead and tobacco poisoning; mental emotions, sneezing, coughing, vomiting, diarrhoea and dysentery, and last, but most frequent, emmenagogue medicines.

The ovular causes are such diseases as cause death in the foetus. They are diseases of the decidua and placenta, apoplexy, inflammation, fatty degeneration, syphilis, hydatiform mole, polyhydra amnios, diseases of the cord, infectious diseases, and placenta prævi.

Some women are liable to a recurrence of abortion. It is always due to the same cause.

**The Symptoms** of abortion are divided into two classes: Premonitory and characteristic.

The premonitory symptoms are pain in the sacral and lumbar regions, fulness and weight in the pelvic organs, irritability of the bladder, sensations of heat followed by chilliness, a feeling of malaise, and the discharge of the vagina is increased.

The characteristic symptoms are painful uterine contractions and hemorrhage.

In abortion occurring before three months, the ovum, as a rule, is expelled entire; after three months, the membranes rupture and the foetus is expelled, while the membranes remain for a few days longer.

In abortion of the first two months, the pain is caused by the uterine contractions in expelling the clots, which last for four or five days, when the products of conception will be expelled, and will be found surrounded by clots and fragments of the placenta and decidua; at this stage abortions resemble a profuse



menstruation. Hemorrhage is less likely to occur in abortions after the sixth or seventh month, the hemorrhage is from the placental site after the placenta is formed.

Before the placenta is formed the hemorrhage will be from the whole of the uterine cavity.

**The dangers of abortion** are hemorrhage and septicæmia, and as an after effect we may have placental polypus, misplacements, and chronic metritis.

**Treatment of Abortion—Prophylactic.**—Remove the cause by treating the syphilis, correcting the retroflexion, or curing the endometritis. The patient should avoid active exercise during that period of gestation, in which she has been in the habit of aborting, and during the period of her menstrual epochs, the eclectic treatment of viburnum compound has been found to prevent; in a great many cases the chlorate of potassium given in ten grain doses three times daily has been found to do good when due to placental diseases.

**Treatment of Threatened Abortion.**—Rest in bed and keeping the bowels open with gentle laxatives and the kidneys acting when necessary, draw off the water with a catheter. An examination should be made, and if any disease of the cervix exist, it should be treated. Any misplacements of the uterus should receive attention, and if possible, a correction made. Large doses of laudanum, morphine or opium in some form should be administered. The patient should be given cold drinks, and for any mental excitement, give ten to twenty grain doses of chloral or bromide of potassium. Keep the patient in bed for a week or ten days after all danger is past, and she should return to bed as soon as any symptoms of a recurrence is felt.

**Operative Treatment.**—When abortion is inevitable, control the hemorrhage and empty the contents of the uterus. To control the hemorrhage, use the tampon. First, wash out the vagina with the corrosive sublimate 1 to 1,000, and then apply the tampon. When the hemorrhage is great, tampon the entire vagina and let remain for fifteen to twenty hours, remove, and then apply a new one. Generally, when the tampon is removed the contents of the uterus will be found to come away with the tampon. The vagina should be washed out again after the tampon is removed. Sometimes the contents of the uterus can be removed at this time by using gentle pressure upon the abdomen over the uterus.



The medicinal treatment consists in the administration of the fluid extract of ergot, in teaspoonful doses alone or in connection with quinine, ten grain doses repeated every four hours. The after-treatment when the absorption is complete is to keep the patient in bed for three or four days.

The use of the tampon in abortion is for three purposes: To stimulate uterine contractions, control hemorrhage and to assist in separating the membranes, by allowing the blood to accumulate in the uterus which dams up between the ovum and the uterus.

**Incomplete Abortion** is treated in two ways: One, to wait for nature to separate the membranes, and the other to remove them at once.

To remove them at once, the vagina and uterus should be washed out with a corrosive sublimate wash. The os uteri should then be dilated with a Barnes' bag or a Simpson's hard rubber dilator, and as soon as possible introduce two fingers into the uterine cavity and remove its contents. If the fingers can not be introduced, the uterus can be pulled down by a Volsella hook and the fingers again tried. If this fails to dilate sufficiently the curette forceps of Emmet can be introduced and the cavity of the uterus thoroughly removed. After the uterus is emptied of its contents the uterus should be again washed out with a corrosive solution, or the tincture of iodine applied to the entire surface.

The strictest antiseptic precaution should be used. Every instrument should be washed with the carbolic acid or the corrosive solution, and the uterus thoroughly disinfected by the corrosive washes, both before and after this treatment.

The indications of missed abortion are the same as incomplete abortion. To empty the uterus of all shreds of placenta and thoroughly disinfect by the corrosive washes. The patient should remain in bed ten days.

## ECTOPIC, OR EXTRA-UTERINE PREGNANCY.

By ectopic pregnancy is meant pregnancy outside of the regular. It is divided into primitive, cervical and extra-uterine pregnancy.

**Primitive Cervical Pregnancy** is that condition in which the ovum is arrested in the cervical canal. It is very rare, and abortion usually occurs in the first three months.

**Extra-Uterine Pregnancy** is divided into tubal, abdominal





TUBAL, OR EXTRA-UTERINE PREGNANCY.

and ovarian. Tubal pregnancies are again divided into tubo-uterine, tubo-abdominal, tubo-ovarian and pregnancy in the one side of a double or one-sided uterus.

**Abdominal Pregnancies** are divided into those of the abdomen and those of the ovary.

The prognosis of all of the extra-uterine pregnancies are very similar, some going to term, some causing rupture with absorption, while others rupture, causing peritonitis and death. The time of the rupture varies according to the form of pregnancy and its location. Rupture in tubal pregnancy occurs about the first or second month. In interstitial pregnancy, rupture takes place about the third month, in abdominal pregnancy, rupture takes place about the fourth month. When extra-uterine pregnancy continues till the fourth month, it is safe to say that it is of one of two kinds—abdominal or tubal. When it is of this variety, the patient complains of growing pains in the lower part of the bowels, and sometimes will feel something rupturing inside; she will then suffer from a collapse, from which she will recover, but sooner or later peritonitis will follow, causing death, or absorption may result.

**The Treatment** consists of methods to destroy the foetus, as it must die to save the life of the mother.

**Puncture** consists of the introduction of a trocar and remov-



ing the liquor amnii. It is not recommended, on account of the danger to the mother.

**Injections** are of morphine, pepsin and tincture of iodine into the ovum ; it is also uncertain and is dangerous.

**Electricity** is the most certain and least dangerous. It consists in the use of the farradic or the galvanic current passed continuously through the ovum for a period of at least fifteen to twenty minutes daily. It is applied by taking one pole of the battery and placing it on the abdomen, and the other is placed either into the vagina or the rectum. This method is the one recommended by the medical profession.

The other method consists in abdominal section. The indications for its performance are as follows : In all cases before the expected rupture of the tube or as soon as the diagnosis is made that an extra-uterine pregnancy exists, and in any case that the use of electricity fails to stop the growth of the foetus.

The operation is also recommended as soon after the rupture as possible, and in all cases of abdominal pregnancy up to the fifth month. After that it is best to wait for the symptoms of false labor. It is also recommended in all cases after false labor where the child is dead and the amnion has been absorbed. But it is not advised where suppuration has taken place. The absorption of the amnion is waited for on account of its indicating the cessation of the amniotic circulation. It is also recommended in all cases where the danger to the mother's life is jeopardized.

**Placenta Praeva.**—Is that condition in which the placenta is attached to that part of the uterus, which dilates as labor advances. It is called central where placenta is directly over the opening of the uterus ; marginal, where the placenta is attached to the uterus and only a small edge is over the neck of the uterus ; partial, where there is more placenta on one side of the uterus than there is on the other ; lateral, where the edge of the placenta is near the os uteri. It occurs only once in about twelve hundred cases. The hemorrhage from a placenta praeva is called unavoidable. The causes have not been definitely settled, but those most accepted are those in which the ovule does not become fecundated until it reaches the lower cavity of the uterus. It is more common in multiple than in single pregnancies, and more often in the poorer classes than in the rich.



**The Symptoms** are hemorrhage occurring during the last three months of pregnancy. Often it does not occur until the last month of pregnancy. The hemorrhage is sudden and without any cause or warning, and is intermittent. The first hemorrhage is usually slight, but the amount of the blood lost increases at each attack. If the first attack occurs near the end of pregnancy it may be so profuse as to cause death. Premature labor may occur after several months of hemorrhage.

The blood comes from a separation of the placenta from a small portion of the uterus left bare by the placenta breaking loose and allowing the uterine veins to remain open.

**The Prognosis** is always grave, death to the mother occurs in about thirty per cent., and to the foetus in about seventy-five per cent. The earlier the hemorrhage occurs in the pregnancy the more unfavorable will be the diagnosis, as the blood will be considerable from the amount lost at different times, while the nearer the end of pregnancy the more blood will be lost at each period of hemorrhage.

**Diagnosis.**—Any hemorrhage occurring during the latter end of pregnancy should be looked upon with suspicion and indicative of placenta praeva. On examination of the vagina, the neck of the uterus feels soft and thickened and sometimes the placenta can be felt through the os uteri, and this is the only sure sign.

**Treatment** consists of inducing premature labor when the following conditions exists :

When the hemorrhage occurs before viability.

When the hemorrhage is grave.

When the hemorrhage occurs after the viability of the child.

Another plan of treatment recommended is to place the patient in bed and administer cold drinks, and give full doses of opium. The patient is instructed to use the tampon as soon as any indications of hemorrhage occurs.

In the induction of premature labor the chief indication will be to manage the hemorrhage during the time the cervix is dilating. This is usually accomplished by using the tampon, which assists in dilating the cervix induces the uterine contractions, and also serves at the same time to stop the hemorrhage by acting as a plug. The tampon should be removed at the end of four hours unless there has been an antiseptic used ; but when it is removed and the cervix is dilated sufficient to allow the use of Barnes' bags, they should be used until the cervix is sufficiently



dilated to admit of the passage of the foetus, and as soon as this is accomplished the membranes should be ruptured and the case left to nature. Late in pregnancy when the placenta is directly over the mouth of the womb and the head is movable, the use of forceps is indicated or turning.

The after-treatment consists in guarding against hemorrhage a full dose of ergot should be administered and the patient kept under its influence for at least one week.

**Accidental hemorrhage** is hemorrhage from a normally situated placenta. The causes are violent exercise, accidents, uterine contractions, (caused by emotional influences) and certain acute diseases. The symptoms are severe pain and collapse, absence and feebleness of the labor pains, a distinct enlargement of the uterus and a discharge of pure blood. In the concealed variety the open variety offers more hope for the mother and child as the uterine contractions can sometimes be brought on by the attempt to turn the foetus, but the prognosis is bad as a rule.

**Treatment** is to make firm compression on the uterus from the outside and give ergot. Induce labor at once by rupturing the membranes and deliver by the introduction of the hand, and grasping the feet, then removing as an ordinary breech presentation.

## CONVULSIONS.

**Convulsions or Eclampsia.**—This is an acute disease occurring during pregnancy, labor, or the puerperal state, and is characterized by convulsions at first, affecting the voluntary muscles, and then the involuntary muscles. It is accompanied by a complete loss of consciousness, and ending in a period of coma or sleep which may end in death.

The disease is more frequent in pregnancy or labor than in the puerperal state. It occurs in the proportion of about one case to 400 pregnancies.

It is a neurosis or a disease of the nerves, and is supposed to be due to lack of nutrition or a surplus, causing either anæmia or congestion of the brain and the spinal centers. Eclampsia is due to some poison which renders the blood unfit to act normally on the nerve centers, and these poisons may be either uric acid, albumen, carbonate of ammonia or the ptomaines.

We have dimness of vision, also vomiting, sleeplessness, dizziness and excitement.



**Symptoms of Attack.**—The attack begins by a sudden movement of the eyelids, the eyes become fixed, and then follows a short period of quiet. The eyelids quiver, the muscles along side of the nose twitch, with twitchings of muscles of the face, the pupils are insensible to the light and dilated, the mouth is twisted toward the left side, and the head rotates from side to side.

**Second Stage.**—Then the symptoms are convulsions extending to the neck and the extremities. The body becomes rigid, the back becomes arched, and the patient rests on the heels and back of the head; the muscles of the trunk become stiffened, the diaphragm ceases to act, and becomes rigid; respiration stops, the tongue is protruded and hangs out of the mouth; the face becomes red and finally black; the arms are distended and rigid; the hands are closed, the thumbs being folded in the palms of the hand; there is a complete loss of sensation. This stage lasts about fifteen to twenty seconds.

**Third Stage.**—Then the clonic stage begins. The convulsions begin in the face, and extend to the extremities. The face becomes rigid and congested; the tongue is again protruded, and is bitten; the respiration is irregular and noisy; the saliva flows from the mouth is frothy and mixed with blood; then follows a period of coma or stupor. At the end of half an hour consciousness returns with sensation. This attack lasts about two minutes. There may be no more attacks, or there may be a rest for a period of two or three hours followed by another or the patient may have another attack, and then get rapidly well.

**The Prognosis** is grave; the mortality is 30 per cent. to the mother, and about 50 to the child. It predisposes to post-partum hemorrhage and inflammations. Conditions that are favorable are the slightness of the attack, small amount of albumen in the urine, and the later in the pregnancy it occurs, the more favorable the prognosis.

**Unfavorable symptoms** are the uterus low down and unemptied; frequent attacks, severe, and occurring early in the pregnancy, the urine scanty, and the coma profound and the temperature remaining high.

**Treatment** is prophylactic curative and the obstetric. Prophylactic treatment consists in light diet, such as milk, and when there is a large amount of albumen, saline cathartics and a milk diet almost entirely. Hot baths should be given in the mornings, and should not be less than ninety-eight degrees F., and the patient



should remain for a period of fifteen minutes in the bath, then drink a glass of milk and be wrapped in a blanket after being well rubbed, dried and placed in bed.

The tincture of the chloride of iron in ten to fifteen drop doses in a half glass of water, and chloral twenty to thirty grain doses by the rectum ; also cathartics to unload the bowels. The patient should avoid lying on the back and should assume the knee-chest position several times daily to correct any misplacements of the uterus. She should continue to use the milk diet as long as there is any albumen present. A good tonic should be given. The following will be found useful : Elixir of the chloride of iron and gentian with twenty grains of quinine added. A teaspoonful of this mixture taken after meals.

The clothing should be kept loose, during the attack she should be watched to keep her from falling out of bed, and a cork tied between the teeth to keep her from biting the tongue during the third stage.

**Curative Treatment.**—The bowels should be freely acted upon by jalap, elaterium, or even croton oil, also a stimulating injection by the rectum.

To allay spasm chloroform should be administered, or chloral thirty-five or forty grains, in egg and milk about six ounces, injected into the rectum. It may be repeated in two or three hours, but if there be no recurrence of the attack, it need not be given again. Sometimes the injections of morphine will be advantageously given in one-quarter grain doses, and repeated in one hour if there is a tendency to recurrence. The chloroform should be discontinued as soon as the effect of the chloral is developed.

**Obstetrical Treatment.**—One-third of these cases stop as soon as the uterus is emptied. During the first stage there should be a catheter introduced into the uterus, followed by the dilating bags, and kept long enough to dilate the cervix. After it is completely dilated, the forceps should be applied and the child delivered. All artificial means to hasten labor should be avoided, except in those cases in which it is clearly indicated, although some authors advise the induction of labor in all cases of eclampsia. If convulsions continue after delivery, morphine or chloral should be used as before. Lusk does not believe in chloroform during the puerperal state on account of its liability to cause death in the child.



## LABOR.

Labor is the physical end of pregnancy ; it is the bringing forth or travail, the condition of the separation of the foetus from the mother.

Labor is divided into : premature, where, after the child is viable and before the full life term ; postponed, where the labor occurs after the full term of two hundred and eighty days and the child lives ; missed, where the labor occurs after the full term, the foetus being dead ; artificial, where nature is aided or replaced by art. The foetus must be of natural size and not larger than normal, with a favorable presentation. The parturient canal, voluntary and involuntary forces must be normal.

The causes of labor are the uterine contractions followed by the efforts of the mother in bringing the abdominal muscles to act and assist the uterus to expel the foetus from the parturient canal.

**Symptoms of Labor.**—The abdominal tumor subsides and settles lower down in the birth canal, causing a pressure and uneasiness of the lower part of the abdomen and a secretion mucous-albuminous in character from the cervix and the vagina. It is streaked with blood, and is sometimes called the show. The vagina becomes relaxed and enlarged. Descent of the uterus occurs anywhere from three weeks to one or two days before the beginning of labor. Labor pains of a mild character occur two or three days before labor begins. When labor begins there are regular pains and the cervix becomes dilated.

Labor is divided into three stages :

In the first stage the cervix dilates.

The second stage begins after the uterus has begun the expulsion of the foetus after the dilation of the cervix and ends after the child is born.

The third stage includes the detachment and expulsion of the placenta.

The uterus undergoes the following changes during the expulsion of the child. The muscles begin to contract in the fundus of the uterus, the uterus changes and becomes ovoidal in shape. The power of the uterine contractions is in proportion to the amount of the resistance. The regularity depends upon the presentation, the vertex being the most regular. The pains are very severe in some women, while in others there is scarcely any pain.

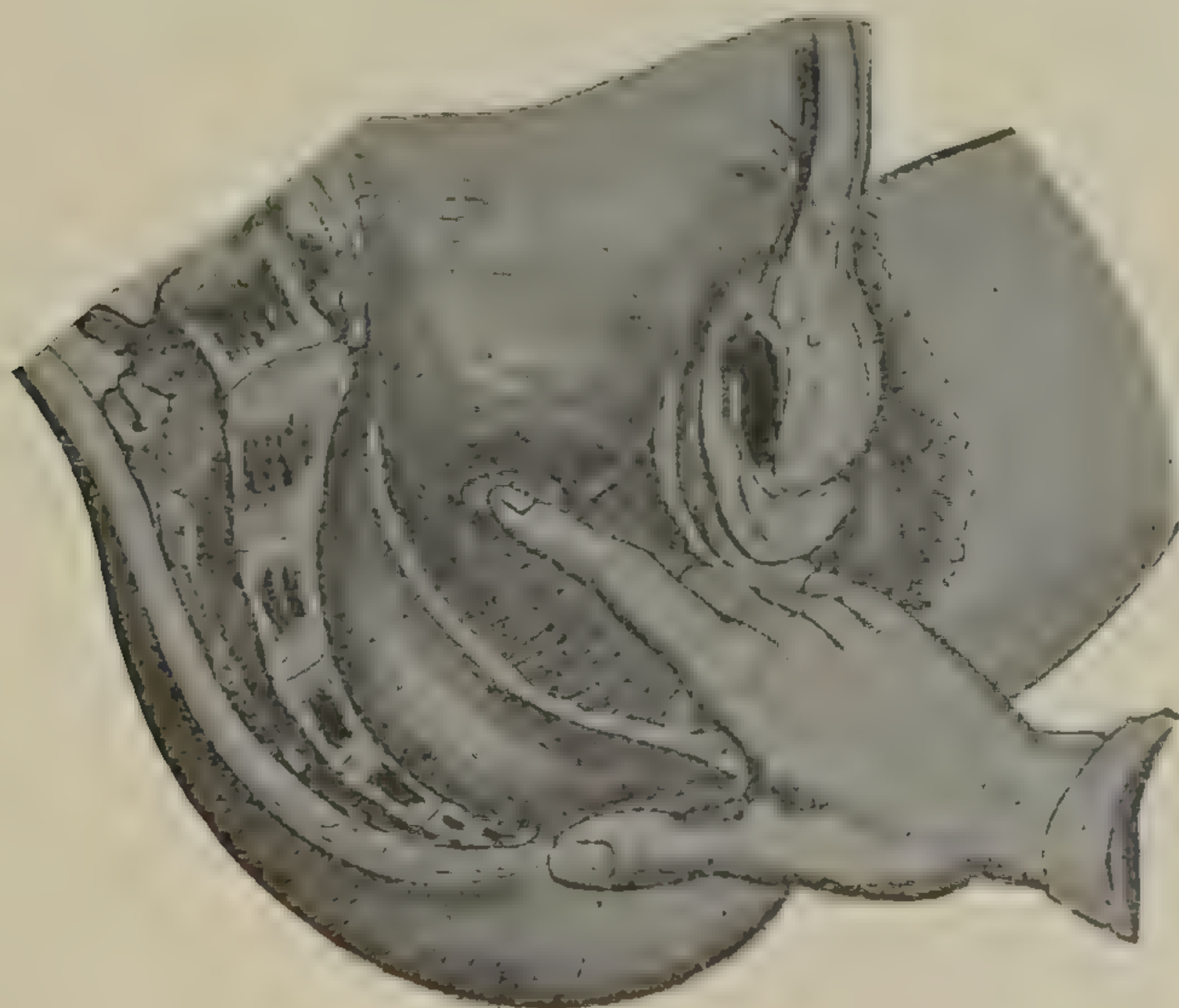


The contractions of the uterus begin before there is any pain, and continue after the pains cease.

In the first stage the pains are grinding and cutting. These are caused by the dilation of the cervix and the compression of the uterine nerves, and by the uterine contractions.

Second stage, the stretching of the vagina, and the nerves of the pelvis and the soft parts, causing the bearing down pains. These give a sensation of stretching or tearing; the abdominal muscles are brought into play and aid in the pain; there is an intense feeling of tearing apart of the vulvo-vaginal canal, and perineum; cramps occur in the legs and a feeling of tenesmus in the rectum.

**The Bag of Waters.**—The projection of the foetal membranes through the os uteri and filled with the liquor amnii is called the bag of waters. The size and form depend upon the dilation of the os, and the size of the foetus. The bag of waters usually ruptures at the time of the complete dilation of the cervix. Labor is a dry labor when the bag of waters breaks in the beginning of the first stage of uterine contraction. False waters is when there is a discharge of mucus in the earlier stage of labor from an inflammation of the cervix.



EXAMINING FINGER AND UTERUS, SHOWING THE BAG OF WATERS PROTRUDING.

The contraction of the muscular coat of the vagina assists in the expulsion of the foetus. After it has left the uterine cavity the perineum becomes slowly distended as the presenting part advances and slowly dilates. At each contraction of the uterus



the head advances but recedes in the interval of the contractions, the stretching of the perineum causes the rectum to gape open and exposes the wall of the rectum. The head advances and recedes until the parietal protuberances escape from the vulva. When it becomes fixed, a strong contraction immediately follows and the head is born. A short rest, and then after the birth of the head, contractions again come on and the body is expelled, followed by a discharge of liquor amnii mixed with blood.

The placenta is expelled usually in from fifteen to twenty minutes. After the child is born, the blood in the uterine sinuses becomes clotted and uterine contraction holds them shut until they are gradually absorbed, thus preventing hemorrhage.

The uterine contractions, assisted by the accoucher and voluntary efforts, causes the placenta, or after-birth, to be expelled.

The accoucher places his hand on the abdomen over the uterus and gently kneads, and at the same time presses gently backward in the direction of the birth canal ; with the other hand he wraps the cord around his finger and gives gentle but firm traction on the cord, and when the uterine contractions occur, the after-birth is expelled.

**The Effect of Labor on the Mother.**—In the earlier stages of labor the pulse rises and becomes more rapid during the pains, and during the interval of the pains or uterine contractions the pulse assumes the normal condition. During the pains the breathing is slower and becomes more rapid ; as the labor advances the urine is increased in quantity ; a slight shivering in some patients occur at the beginning of uterine contractions. In the latter stages sleep is induced from exhaustion, and is an indication that delivery should be completed at once.

**Duration of Labor.**—In first labors the time is usually seventeen hours, and in multiple pregnancies labor lasts twelve hours. The first stage lasts about two-thirds of the time ; the second about one-third ; the third stage occupying only a few minutes, or a half hour at the farthest. Labor usually begins between the hours of 9 and 12 o'clock at night, and ends about the same hours the next morning.

False labor pains are caused by rheumatism of the uterus and contractions of the abdominal muscles.



## MECHANISM.

**Mechanism of Labor.**—The passive movements of the foetus in its expulsion is called the mechanism of labor.

There are five presentations of the foetus: The vertex, the face, left shoulder, right shoulder, the breech. In vertex or head positions there are: Left anterior or front and right anterior, right posterior, left posterior, and these will answer as well for the face and breech. In shoulder presentation there are but two positions: Anterior and posterior. That portion which presents itself at the pelvic inlet is called the presentation.

Position is that relation which the presenting part of the foetus bears to the pelvic inlet according to certain fixed points.



SHOWING POSITION OF FŒTUS AND ABDOMEN AT TERM.

In head presentations, the mechanism of labor consists of the adaptation of the head to the brim of the mother's pelvis, the descent of the head and body of the child into the cavity of the



pelvis, the rotation of the child toward the front surface of the mother's body and finally its expulsion, the intermitting uterine contractions during the latter weeks of pregnancy, and the intermittent contraction, aided by the elasticity of tissues previously distended, results in the descent of the presenting part into the cavity of the pelvis in multigravidæ. In primigravidæ at the commencement of labor, the head is usually found at the brim of the pelvis. As the head enters the pelvis it will adapt itself to the diameters of the pelvis, and in the majority of cases, the head enters obliquely. The vertex being at the left front half of the pelvis, the face and chin of the child will point toward the right posterior surface. The occipital-frontal diameter of the head, measures four and three-quarter inches, the same as the oblique diameters of the pelvis at the brim. The oblique diameters of the pelvis are capable of slight increase by relaxing of the muscles and ligaments, and will usually be sufficient to accommodate the occipital-frontal diameter of the child's head. To relax these muscles, flex the patient's thighs upon the abdomen. This simple maneuver will assist in the descent of the head and hasten a lingering labor. The head having been flexed, descends gradually through the brim into the cavity of the pelvis, the back of the child remaining directly toward the left side of the mother; as the trunk descends the head precedes it. The shoulder diameter of the trunk of the child measures four and three-quarter inches, engages in the left oblique diameter of the pelvic brim. When the foetus has sufficiently descended to enter the pelvic cavity, the membranes by this time have usually ruptured and the amniotic liquid escapes and the exact position of the head can easily be determined upon examination. In the first position a left occipito-anterior (or front and back), sagittal (or middle) suture will be found occupying the right oblique diameter of the pelvis toward the mother's right side, and a little back of the center of the pelvic cavity, can be felt the anterior-fontenelle. This land mark is not obliterated by the pressure which the head undergoes, and may be readily distinguished by its size, also by the fact that out from it run four bony lines. These are the sagittal, the fronto-parietal of each side, and the suture between the two frontal bones.

The posterior fontenelle is ordinarily obliterated by the pressure exercised by the walls of the pelvis upon a foetal head, the bones sometimes sliding under each other in such a manner as to fill up the interval and leave simply a point of convergence of



three sutures, namely : The sagittal and the two branches of the lambdoidal. In head presentations, a swelling forms on that portion of the head which is not pressed upon during labor. It is a result of infiltration of serum under the scalp.

**In Vertex Presentation**, with normal rotation, a swelling is found on the upper angle of the parietal bone opposite the presenting point; in left occipital anterior, on the upper angle of the right parietal bone. This is called the caput succedaneum. Physicians, in an examination at this stage of labor, will find this point of convergence upon the left side of the mother's pelvis and towards its front surface. He will also at this time be able to distinguish the sagittal suture extending toward the right and back, unless the tissues are firm and resisting ; and he will be able to find the anterior-fontenelle.

Labor proceeding, a phenomenon of rotation occurs as the head descends. We understand by rotation that there is a turning of the head upon the pelvic floor, so that its antero-posterior diameter is parallel with that of the pelvic outlet. The antero-posterior diameter of the pelvis is the only outlet large enough to permit the expulsion of the foetal head. The anterior rotation of the head brings the vertex beneath the pubic joint, the occipito-frontal resting upon the antero-posterior diameter of the pelvic outlet. The vertex being strongly forced beneath the pubes, the neck pivots upon the sub-pubic ligament. Under the force of the uterine contractions the coccyx is bent backward, and the forehead and face are forced over the pelvic floor and perineum by a movement of extension. In the meantime the trunk follows the head with a corresponding rotation.

**The Shoulder Diameter**, or bi-secromial diameter, having entered the pelvis in the left oblique diameter, the trunk descends and the right shoulder of the foetus turns toward the pubic joint and is first forced downward, emerging beneath the joint with the mechanism, like that which the occiput has already executed. The lower shoulder is then exuded similar to the extension of the face and chin, and the trunk and limbs of the child following in the same manner.

On account of the rotation of the head, and emerging before the shoulders, causes the vertex to turn toward the left thigh of the mother, as soon as the head is born. By this presentation no delay will be caused unless there is a malformation of the pelvis,



as the body is always sufficiently compressible to follow the head. The strong contraction of the uterus characterizes the second expulsion stage of labor, supplemented by the contraction of the abdominal muscles. Fixation of the diaphragm and contraction of such muscles of the trunk are necessary for this phenomenon.

At the commencement, when the membranes are ruptured, there occurs a discharge of amniotic liquid, with more or less discharge of blood-streaked mucus. This continues throughout the first stage of labor. At the interval between the uterine contractions a slight pause occurs, during which the patient, if fatigued, often lapses into a condition of coma, or sleep.

The face is flushed and the surface of the body is frequently covered with a slight perspiration, the entire organism gives evidence of the great muscular activity which is going on. As the contractions become more violent, the pain increases until it seems unbearable. Occasionally a condition of temporary delirium or mania supervenes, which is of short duration. The pulse, although quicker than usual, is firm and strong, and shares in the general vigor of the muscular system.

During the early stages of labor the patient will naturally assume such a posture as is calculated to bring the head well into the pelvis, thus facilitating birth. The woman frequently walks about the room, or assumes a semi-recumbent position, frequently kneeling at the side of the bed, her head resting upon her arms, which are folded on the body. After the rupture of the membrane, she instinctively assumes a recumbent position, after turning from side to side, if her sufferings are severe.

The mechanism, when the vertex is directed toward the right side of the mother's pelvis and in front, corresponds to that already described, with a simple diversal direction in rotation.

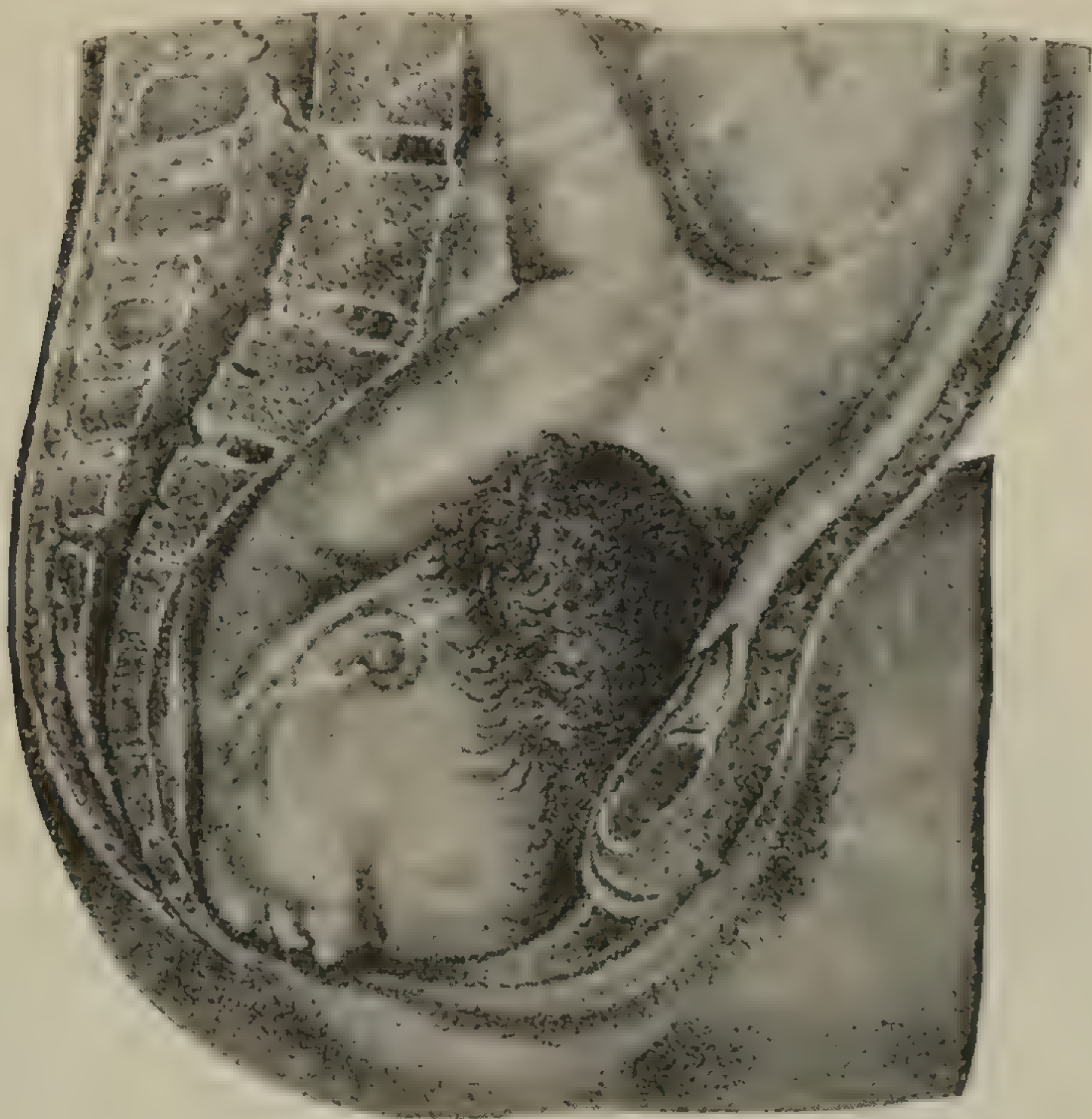
Thus the head and trunk, in the first instance rotating from left to right toward the middle of the body, in the second instance they turn from right to left, toward the center.

While the former is much more frequent, the distinction between the normal labor, the head presenting will depend upon two factors: Presence or absence of flexion and the anterior or posterior rotation of the occiput.

**Face Presentations.**—There are two varieties of face presentation, the chin or mento-anterior, the forehead or fronto-anterior. Chin positions are of two varieties, two to the right and two to



the left side of the pelvis, and in the presentation of the chin to the right or left and front the mechanism would be the same. In



SHOWING WRONG FACIAL POSITION.

this position the chin first extends as the head descends until the chin passes under the pubic arch and passes through the external pelvic outlet, the shoulders and body following in the same manner as the head. Then the mento-posterior, or chin, to the back part of the pelvis is the position that is impossible to deliver. But by holding the index and second fingers against the chin we can cause the occiput to descend, thus forming an occipital position; or it may be necessary to form a new position by turning.

**Shoulder Presentation** is considered an abnormal presentation, and when it occurs podalic version, or turning, must be performed. The diagnosis of this displacement is difficult, as the displacement is too high up to be reached by the examining finger. In ordinary cases, the uterine contraction being strong, the pelvis being of a normal size, if the head fails to make any progress after a length of time it will be evident that all is not well. The patient should be placed under the influence of an anæsthetic, and in this way a complete diagnosis can be made. At this time the arm may be brought down, thus forming an arm and head presentation; but the most effective plan is to perform podalic version.



**Breech Presentation.**—There are two positions each for the right and left shoulder.

If the right shoulder presents, the back anterior would be the right dorsal anterior; if posterior it would be right dorsal posterior.

In the former position, the head is in the illiac fossa and the breech in the opposite side, and in the latter, the head is in the right illiac fossa and the breech on the left side. The left shoul-



SHOWING FLEXION OF CHILD'S BODY DURING DELIVERY OF BREECH.

der, if it presents the back anterior (left dorsal anterior) if it is posterior (left dorsal posterior) in the L. D. A. position, the head is in the right illiac fossa, and the breech on the opposite side and the L. D. P. position, the head is in the left illiac fossa and the breech in the right side.

**The Treatment** of breech presentation requires an early recognition of the presentation. It is very important that the membranes be not ruptured until a diagnosis of the presentation is made. One of the great dangers to which a child is exposed, arises from defective dilation of the os and cervix, which con-



tract about the head at the moment of delivery, thereby, often, causing death by asphyxia. This is especially true in breech presentations, as the head coming last, is exposed to pressure from the vaginal walls and sphincter muscles, also the resistance from an imperfect and dilated os.

In a simple breech presentation, hastening of the trunk should be avoided. Traction carelessly made upon the hips and limbs will often cause the ascent of the arms to the side of the head and seriously complicate delivery. As the breech emerges the wedge formed by the breech and flexed thighs will be gradually decomposed and the limbs become extended. Occasionally the limbs presents from the beginning of labor, constituting what is known as a footling case. As the body of the child descends the position is supported by the physician with one hand, while standing ready to raise the body of the child toward the mother's abdomen with the other. The physician should at the same time make gentle but firm pressure over the uterus at the moment



METHOD OF DELIVERY IN BREECH PRESENTATION.

when the head emerges. These simple maneuvers will result in a prompt expulsion of the head in uncomplicated cases. In case anæsthetics have been used they should be discontinued at this stage, in order to allow the mother's intelligent co-operation in making efforts to expel the head at this moment.

In all breech presentations it is well to have forceps at hand and all proper means of resuscitating an asphyxiated child. For this purpose a warm bath, with a sprinkling of cold water upon the chest of the child is the best, and often all that

will be required. It is well to be provided with a small catheter, which may be introduced into the trachea in case it should be necessary to inflate the lungs. Should the heart's action fail,



applications of heat should be made, or digitalis given by hyperdermic injection. When the arms of the foetus have become extended the physician must liberate them and bring them down. The index and middle finger of the right hand are then passed over the child's right scapula and along the upper surface of the humerus until the bend of the elbow is reached. The foetal arm is then flexed at the elbow and carried downward across the chest, when it easily drops into the vagina. At the same time the body should be grasped, and downward traction first made upon the trunk, and then it is bent strongly toward the mother's right side. The body is then carried obliquely toward the opposite side and the other arm also liberated.

**Multiple Pregnancies or Twins.**—The diagnosis of multiple pregnancies is usually made after the birth of the first foetus. If the abdomen does not diminish in size, the physician's suspicions



UTERUS WITH TWINS, SHOWING HEAD AND BREECH PRESENTATIONS.



should be aroused, and an examination should be made by introducing the antisepticized hand. If the foetal sack is unruptured, good uterine contractions should be secured by gentle friction, and labor will proceed spontaneously. If the sack of the second foetus is ruptured and the second twin is not born promptly, and the vortex presents, the forceps should be applied. If the face or shoulder presents, immediate version is indicated with extraction by the breech. The position and attitude of the foetus is usually: one presenting the breech end, the other the head.

Labor in multiple pregnancy is slow in the first stage, because the cervix dilates slowly and the lower uterine segment is not readily formed. The second stage is frequently short, as the small size of the children renders the expulsion easy. In the third stage the over-distended uterus may contract imperfectly, and placental retention and post-partum hemorrhage are not infrequent.

If the position is not favorable for a prompt expulsion, the imperfect dilation of the cervix and the lower uterine segment threaten the life of the second twin by pressure.

Pregnancy rarely goes to full term when more than one foetus is present. The uterus is usually more sensitive to reflex irritation on account of the over-distended condition of the uterus, and the labor pains are more easily excited.

In multiple pregnancies abnormalities of the membranes and placenta are often present. One foetus frequently kills the other by pressing against the uterine wall. The foetus which perishes becomes flattened, shriveled, thinned, and is called foetus-papyraceus, or parchment foetus. Monsters occur in multiple pregnancies.

**Turning or Version.**—In arm and face presentations, the only safe treatment to the mother and child is turning the child about so that its long axis shall coincide with the axis of the birth canal. This may be accomplished in three ways: By turning the child within the womb, by internal and external manipulations combined, and by external manipulation only. To accomplish the third, the membranes should not have been ruptured and the patient should not be in the act of labor. If the abdominal muscles are irritable and she is sensitive, she may be partially anæsthetized with chloroform or ether, or a large dose of chloral administered. The outline of the two extremities of the foetus can be easily dis-



tinguished, and by pressing upward upon one of them and downward upon the other, or by a series of gentle sliding movements, either the head or the breech can usually be brought to the brim of the pelvis. This is known as external version.

**Combined Version** is appropriate for cases in which the membranes are not ruptured, and when the os and cervix are partially dilated and uterine contractions are not strong. To perform this successfully anæsthesia may be, but is not always, required. It is performed by placing one hand upon the abdomen, while two fingers of the other are inserted within the vagina and cervix, endeavoring to lift up the presenting shoulder, dislodging it, and thereby favoring turning ; the external hand, by pressing upward upon the breech, favors the descent of the head.

**Internal Version** is performed when there is not sufficient time to perform either of the other manipulations, and in cases where the membranes have ruptured, or are ruptured by the operator. To perform this, introduce one hand within the uterus, grasp the feet of the child and bring them down. By so doing, we convert a transverse into a breech presentation. The patient should always be anæsthetized and placed across the bed with the hips projecting over the edge. The bladder and rectum should be emptied and the cavity of the uterus washed out with an antiseptic solution. The physician should carefully palpate the abdomen to determine the distention of the lower uterine segment. A clear diagnosis of the presentation and position should be made, and the situation of the feet determined. The physician then selects for introduction the hand which will pass most steadily to grasp the feet. The arms and hands of the physician should then be thoroughly antiseptized. The back of the hand may be slightly smeared with some antiseptic ointment (the patient being anæsthetized), and the thumb and fingers folded toward each other, thus reducing the width of the hand very considerably. The right hand should palpate the abdomen externally, endeavoring to push up the foetal head, while the other hand brings down the breech. The internal hand should be gently pushed on until the feet of the foetus can be grasped. This should be done in such a way that the finger nails will be turned away from the uterine walls and toward the center of the uterine cavity. The feet should be seized between the middle and index fingers, folding the thumb over upon, and grasping them firmly in the palm of the folded



hand. The traction of the folded hand should be slow, strong, but gentle. Until the foetal limbs have fully descended, the external hand should endeavor to push up the head. After the feet have been brought down, it will be well to delay the extraction of the child, allowing a time for the mother's uterine contractions to expel it.

In case there is danger of the limbs receding, it will be well to take the precaution of tying a bandage of antisepticized gauze around the ankles. When turning is accomplished, the future course of the labor will be simply that of an ordinary breech presentation.

### PRECIPITATE LABOR.

Precipitate labor is that condition in which the foetus is expelled quicker than in ordinary labors, or earlier than fourteen hours.

**Causes.**—Relaxation of the soft parts of the mother and excessive force and frequency of the uterine contractions.

**Prognosis** is favorable if there is no obstruction in the birth canal, if the presentation of the foetus is normal, and if proper precautions are taken in the danger of laceration of the soft parts, (perineum and cervix), post-partum hemorrhage from relaxation of the uterus. The foetus may die from asphyxia or from continued compression. If delivery occurs while the woman is standing, inversion of the uterus may occur from an unattachment of the placenta and the child may be injured by the fall.

**Treatment.**—The woman should be placed in bed upon her side and all bearing-down efforts forbidden. Inhalations of chloroform and ether may be used, to the extent of complete anesthesia. Hyperdermic injections of morphine or twenty grains of chloral has been found useful. If there be emphysemia, forceps should terminate the labor.

### PROLONGED LABOR.

The causes of prolonged labor are: Malpositions of the foetus; pelvic deformity; neoplasms; encroachments upon the birth canal; malposition of the uterus and rigidity of the soft parts; weak bearing down efforts, caused by general debility; great pains, associated with uterine contractions; deficiency



of uterine force, due to frequent child-bearing ; disorders of the intestines ; premature rupture of the membranes ; mental influences ; the aids of the patient in deficient uterine intervention and from over-distention of uterus, or from plural pregnancy.

**Prognosis** depends upon the cause, upon the condition of the mother and child, and the stage in which the delay occurs. In the first stages there is no danger to the child as long as the membranes remain unruptured. In this condition and stage, labor will be prolonged for many days, without any danger either to mother or child. To the mother, as a rule, there is no immediate danger, the only danger being a loss of sleep and appetite ; also from exhaustion.

**Second Stage.**—Delay during this stage endangers the life of the child by asphyxia. After the child's head has been arrested for one or two hours after reaching the pelvic floor, delivery should be completed by the use of forceps. To the mother, the dangers are due to a prolonged pressure on the soft parts, causing sloughing, followed by septic infection, or the exhaustion may be so marked upon the mother as to endanger life or at least recovery for a long time.

**Third Stage.**—The danger arises from hemorrhage.

**Treatment** depends very much upon the cause. From deficiency of uterine force, if the membranes have not been ruptured, rupture them and allow the liquor amnii to escape. From a full bladder and rectum, to unload the bowels, empty the bladder with a catheter. From a deficient uterine force, caused by early rupture of the membranes, general debility, mental emotions and frequent child-bearing, treated upon general principles.

If there is great suffering in the first stage, give chloral or hyperdermic injections of morphine, or an enema of thirty or forty drops of laudanum, or thirty grains of chloral. If the patient becomes restless in the early stages, and the pains are weak, or ineffective, or the patient shows signs of exhaustion, indications are to give a temporary rest by using either chloral or morphine.

**To Stimulate Ineffective and Weak Uterine Contractions.**—Electricity can be used by placing an electrode on either side of the abdomen, over the uterus and continued from fifteen to



twenty minutes or the hands may be placed over the sides of the fundus and body of the uterus, and during each uterine contraction make firm but gentle pressure backward and downward, toward the superior strait. This will be contra-indicated if the uterus be unusually tender, or in a state of tonic contraction due to exhaustion, and again the birth canal must be normal in size, and the presenting portion of the foetus favorable. The forceps should not be used unless the head is descended into the pelvic cavity and has been delayed for two hours.

**The Drugs to be Used.**—Ergot can be given by the mouth in the form of fluid extract, teaspoon to tablespoonful, or the ergotine may be dissolved in water and administered hyperdermically in two grain doses. The indications for its use are : When the labor is far advanced and the os fully dilated, the position and presentation of the foetus must be favorable and the birth canal normal. Quinine in doses from ten to twenty-five grains guards against post partum hemorrhage by promoting permanent and tonic urine contractions. It will also excite uterine contractions by its action upon the nervous system and its general tonic effect. It is useful in cases where the lochial discharges have been excessive, diminishes the quantity, and as a rule, lessens the after-pains. It is useful in the earlier stages of labor and if then used it can be used in the later stages by giving the last dose after the delivery of the child and before the third stage begins.

**Excessive Development of the Foetus.**—In delivery when the bones of the head are prematurely ossified, the same rules should guide as in all cases of disproportion between the size of the foetus and the pelvis. If it is not impossible to deliver by the forceps, embryotomy should be performed.

**Large Size of the Body.**—When the trunk of the foetus is excessively developed, there is very little cause of dystochia, for if the head has been born, the body, being compressible as a rule, will follow. If the shoulders cannot be delivered, embryotomy must be performed.

**When the Foetal Head has been Excessively Developed,** the indications are for the induction of premature labor in such cases where previous pregnancies were still-born from excessive development.

**Hydrocephalus.**—This is an effusion of serum in the cranial cavity of the child.



**The Causes.**—It is caused by strong mental emotions, some soul-harrowing heart-trouble, causing fever, painful headaches in the mother; in the last three months of pregnancy, alcoholism, cretinism, syphilis, impoverished conditions of the mother's blood, and consanguineous marriages.

**Diagnosis** is made by auscultation, palpitation, abdominal, vaginal touch. The head will be felt larger and higher up than normal, the heart sounds will be heard above, or at the transverse line; fluctuation of the head can be felt by the examining finger, the cranial bones will be found less firm, more flexible, and the presenting part is larger than normal. Fontanelles and sutures are farther apart and more open. During the pain the scapula remains smooth, and there is no over-lapping of the bones. In breech labors the diagnosis is not made until after the trunk is born, when it will be found that the head will not descend. By palpation the uterus is found to contain a large body and the abdomen is much larger than would be the case after the expulsion of the body of the child with a normal-sized head.

**Mortality.**—The greatest danger is from rupture of the uterus, sloughing of the soft parts, and exhaustion may endanger the life of the patient. If hydrocephalus be recognized early in the labor, the prognosis to the mother is favorable. Prognosis to the child is bad. As a rule, if the life of the child is not sacrificed during labor it dies early in infancy.

**Treatment.**—If the labor is delayed beyond the usual time puncture the head with trocar and draw off the fluid. If the delivery does not take place spontaneously, make traction with the forceps or cranioclast. In cases where the head is last, if making a moderate amount of traction, and at the same time making gentle pressure upon the head above the pubes, and the foetus cannot be expelled, resort to puncture. In case the head is too high up in the pelvis to reach with the instrument, open the spinal canal and introduce an elastic catheter into the brain. The opening in the spinal cord should remain as close to the mother's body as possible.

#### PRELIMINARY PREPARATIONS.

The following articles should be carried by the physician: some form of the bichloride of iron, fluid extract of ergot, or the ergotine; some silver wire sutures or the silk or worm gut suture;



one pair of dressing forceps, needles and needle holder; a catheter; pair of obstetric forceps; a stethoscope and a hyperdermic syringe; two or three ounce vials of chloroform, or ether; also hydrate of chloral, some pearls of nitrate of amyl, and some antiseptic tablets, and boracic acid.

The articles provided at the house should be: hot and cold water, brandy, (also ice should be kept in readiness) a fountain syringe should always be provided, (and the hot and cold water always ready for the purpose of antiseptics and to control post-partum hemorrhage). It should be of the best make and in perfect working order.

**The Bed.**—The bed should be placed so as to allow free access from both sides, it should be composed of hair, cotton or some other firm material, then over the lower two-thirds of this, spread a rubber cloth for protection. Over this, fold two blankets, in halves, so that the two folds in the blankets join a little to one side of the middle of the bed. Over this, spread a sheet in the same manner as the first side blanket, then cover the entire bed with another sheet. After the labor, remove the rubber cloth, and everything upon it, remove the side blanket and bring across the other half of the folded blanket and the other sheet, thus forming a dry bed.

**To Arrange the Patient's Clothing.**—A sleeveless vest should be provided; the night dress should be raised above the hips, and protected by a sheet folded once and secured by safety pins. After delivery, remove the sheet, and bring the night dress down over the hips and limbs.

**The Management of the First Stage of Labor.**—Dilation of cervix and the descent of the head into the pelvis, are favored by the upright or sitting position, therefore it is best for the patient not to lie down. The bladder should be emptied frequently. If there is retention of urine, an elastic catheter should be used. At the time of making the vaginal examination, if the rectum is found to contain feces, an enema should be given of soap and water and the bowels thus emptied.

**Food and Drink.**—If the patient desires food, some light, simple nourishment can be given. If she desires, she may drink cold water, beef tea, and if she be weak, she may drink an occasional dose of brandy and water, with a little sugar.



**Membranes.**—Examinations should be made every hour to ascertain the progress of the labor and the position of the child. If spontaneous rupture of the membranes does not occur, as soon as the cervix is dilated, it should be artificially broken. The physician should have his finger with a nick in the nail, and with a saw-like motion, the membranes may be ruptured during the pain. During this stage the physician should remain constantly with the patient.

**Second Stage.**—The patient should be in bed during the entire time. Before the head has reached the floor of the pelvis, the patient should, during a pain, sit up in bed with the feet fixed, and the hands pulling upon a sheet attached upon the foot of the bed, or she should take hold of the hands of a nurse. At the time of delivery, she should assume the left lateral position, as it lessens the danger of rupturing the perineum, and aids the physician to make such manipulations as he may see necessary. During this stage, the examinations must be more frequent, so as to ascertain the position of the presenting part from time to time, and if the head remains stationary for two hours at the floor of the perineum, labor should be terminated by art.

**Managing the Bearing-Down Efforts.**—If the progress of the labor is rapid and the pains are strong, voluntary efforts certainly do harm, and the patient should bear down only during pain. When the head distends the perineum, she should cease all voluntary efforts, and should be instructed to keep her mouth open and her abdominal muscles relaxed, so as to prevent undue tension upon the perineum, which may cause laceration. During the first stage of labor, voluntary efforts are not only useless, but injurious. Bearing-down efforts should be discouraged when the labor is slow, as they unnecessarily tire the patient.

The rectum and bladder must be empty. The patient frequently expresses a wish to empty the bowels during this stage. This desire is caused by the pressure of the advancing head upon the rectum.

**Food and Drink.**—Cold water will be all that is necessary in the way of a drink, and, as a rule, she will require but little food, but what is given should be in small quantities. The patient's face and hands should be bathed with cold water from time to time.

**To Preserve the Perineum.**—Position of the patient should be upon the side, the knees drawn up on the abdomen and a folded



pillow placed between them. If the perineum will not sufficiently relax to allow the escape of the head without producing a tear, the head should be retarded by direct pressure of the physician's hand, and the voluntary bearing-down efforts cannot be controlled anæsthetics should be administered.

**Birth of The Body.**—One hand of the physician should be placed upon the abdomen and followed down the uterus as it descends and forces out the body, and when the head is expelled, it should be held in the right hand. If the cord is coiled around the neck, the loop should be enlarged until it can be drawn over the child's head, or the shoulder and body could be delivered through the loop, if this fails, the cord should be divided and each end ligated. After some little delay, the shoulders will be delivered. Their expulsion should be left to the uterine contractions, which may be strengthened by the friction over the fundus with the left hand.

Sometimes the delivery will be rested by the anterior shoulder being engaged by the symphysis. The shoulder can be liberated by making traction directly downward with the hands placed on the side of the head. It may be necessary to assist the expulsion of the shoulders by directing the head up toward the symphysis, at the same time, making slight traction. After the shoulders are delivered, the body is rapidly expelled. However, if there be any delay, grasp the thorax with the hand and make gentle traction.

**Care of the Child.**—As soon as the child is born, place it away from the mother's discharges near the side of the bed, care being taken not to drag on the cord; clear the mucus from the mouth and throat with the finger. If respiration does not occur, tie the cord about one inch and a half from the body and sever, tying the placental end of the cord, then place the child in a basin of hot water, leaving the chest exposed and dash cold water upon it until breathing is established, when it should be handed to the nurse.

**Tying the Cord.**—When the child breathes freely and the pulsations lessen in force, a few strands of cotton thread may be used to tie the cord. It should be tied about an inch and a half or two inches from the umbilicus. Before handing the child to the nurse always see that the ligatures control the vessels. A late ligation of a cord is advisable because the child receives more blood than in the early ligation, and it will lose less weight dur-



ing the first week following birth. In children who have been badly nourished, or are born prematurely, late ligation is especially indicated, and it is well to wait until the pulsations have entirely ceased.

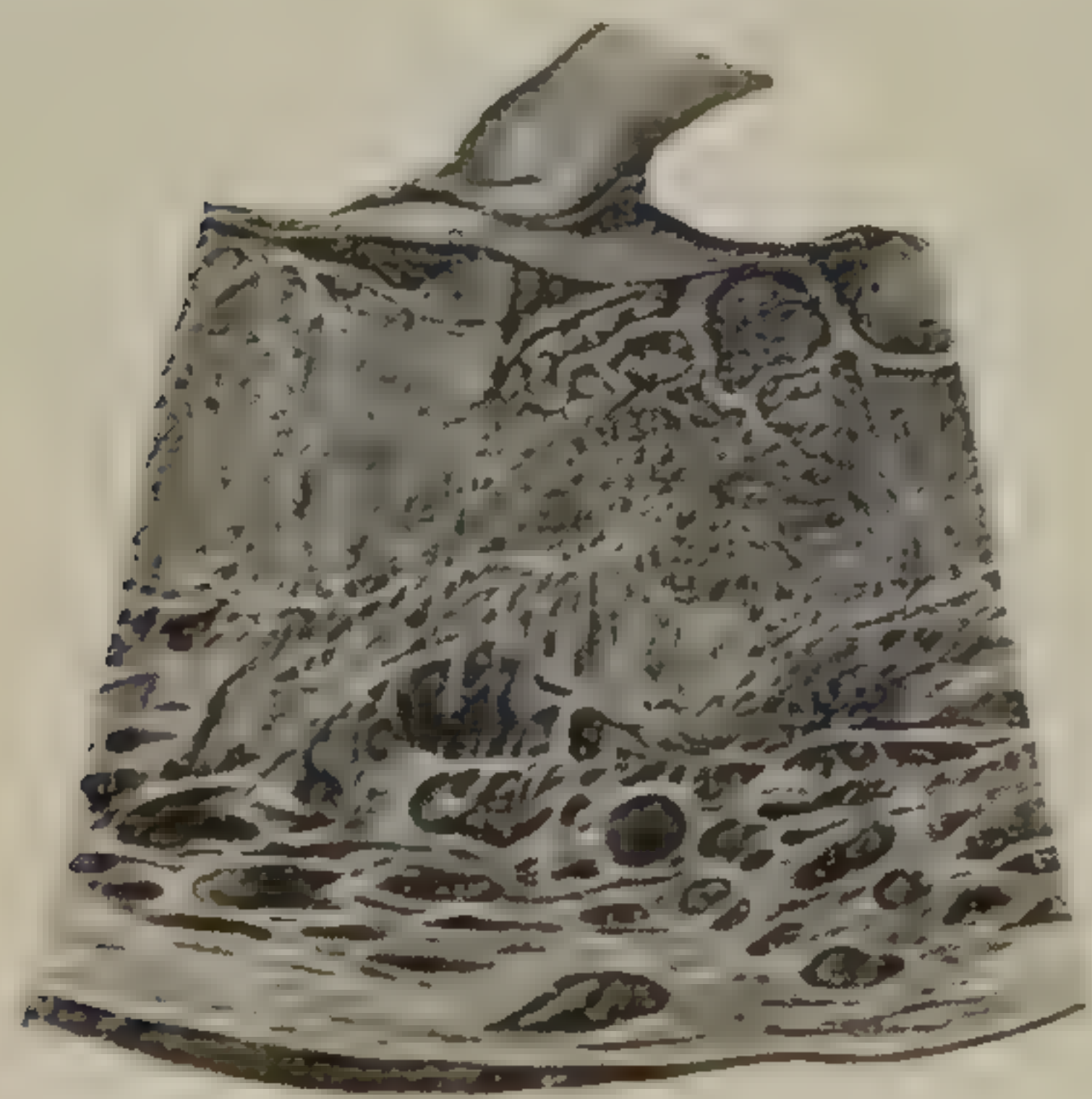
**Placental or Third Stage of Labor.**—Immediately after the birth, the nurse should place her hand on the uterus and keep it there until the physician is ready to deliver the placenta. The patient should be placed upon her back after the delivery of the child.

**To Deliver the Placenta.**—The indications are to keep up uterine contractions and assist in the delivery of the placenta and prevent post-partum hemorrhage. The plan usually employed to affect expression of a placenta consists in making, at first, gentle and then stronger friction over the fundus and body of the uterus through the abdominal wall. During the uterine contraction the hand grasps the uterus with the fundus resting in the palm, while the sides are compressed between the fingers and thumb, at the same time making moderate rotation pressure in a downward and backward direction.

After three or four uterine contractions, the expulsion of the placenta from the uterus is generally effected. In order to remove the placenta from the vagina, gentle traction may be made upon the cord with the right hand, while the left presses down over the uterus and forces it out. After the placenta has been delivered, the physician should examine the uterine surface, to be sure that no portion has been left in the cavity of the uterus. At this time give the patient a teaspoonful of ergot.

### THE PLACENTA OR AFTER-BIRTH.

When impregnation takes place the impregnated ovule passes down the fallopian tube and becomes lodged in the fine-hairy portions of the decidua vera, which mingle and become attached to

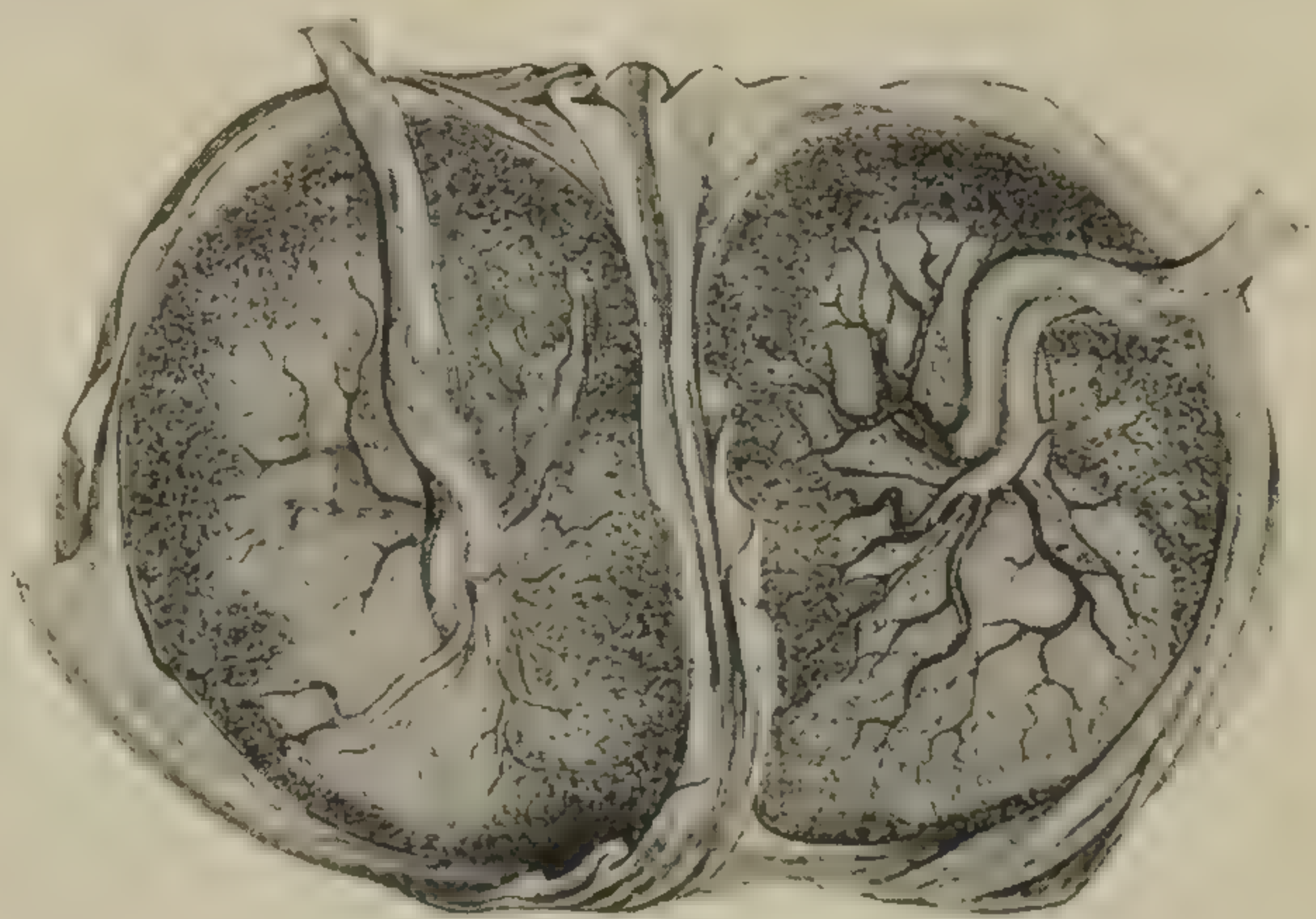


SECTION OF PLACENTA.

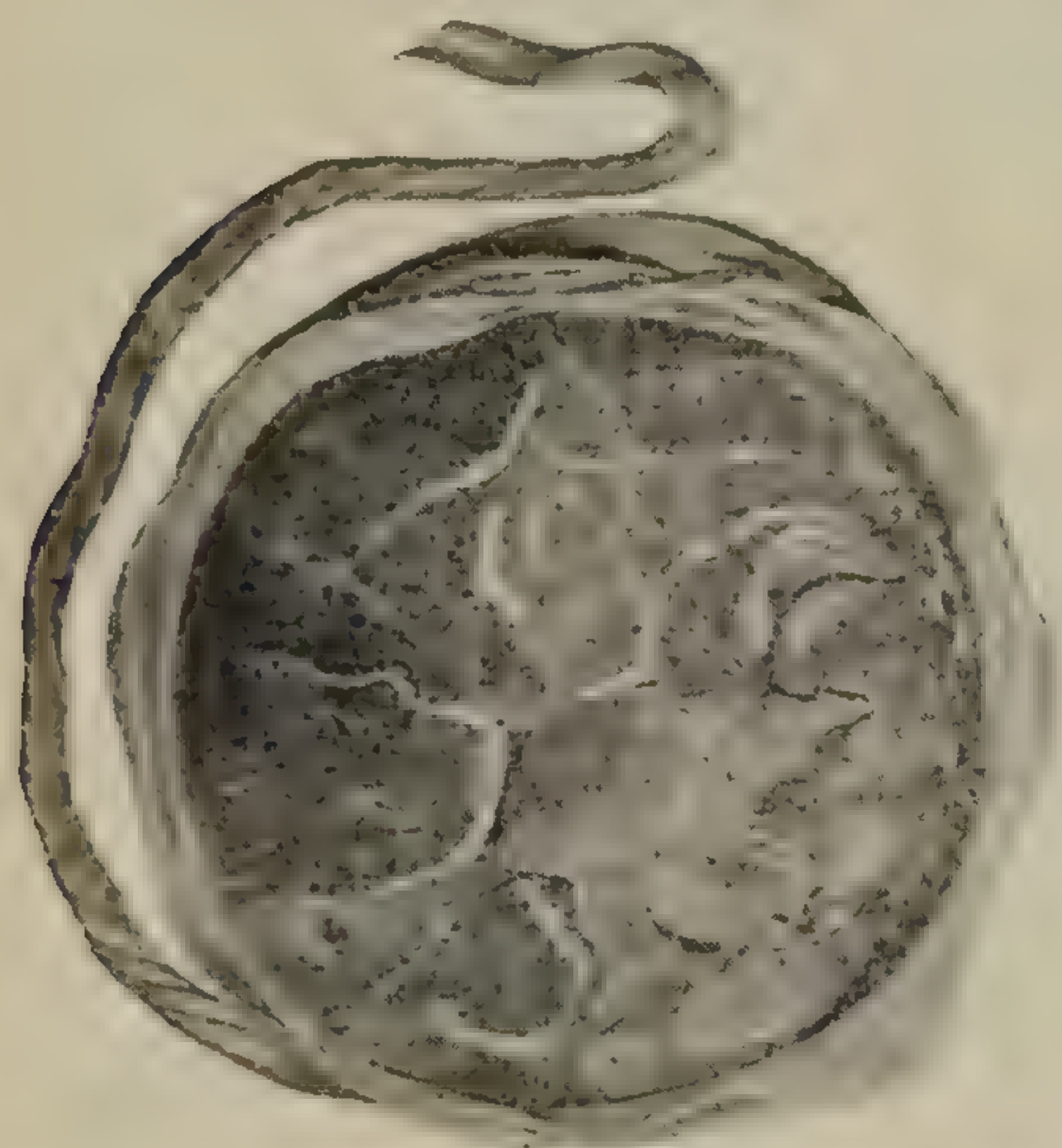
the hairy or outside of the ovule. As pregnancy progresses this hair like attachment becomes larger and thicker, forming the blood vessels through which the foetal blood freely flows on the ovarian side and maternal blood on the decidual side. It will be seen by this that the blood of the mother and the blood of the foetus do not mingle, but simply pass close to each other, being separated



by a thin, membranous coat of vessels of the decidua and ovary, pregnancy advances and the demand for more blood and more oxygen is made by the foetus; these vessels become larger and thicker, and the decidua increases in size until, at the end of pregnancy, it is about six inches in diameter and about one and one-half inches thick, composed almost entirely of blood vessels, and having the



DOUBLE PLACENTA OF TWINS—FŒTAL SURFACE.

SINGLE PLACENTA UMBILICAL CORD  
- MATERNAL SURFACE.

appearance of an expulsion of liver; the foetal membranes being attached on all sides, with a rent on one side where the foetus escaped during the delivery. In all cases of normal labors the after-birth is expelled almost entire in from half to one hour after the child is born. It is always well to examine the placenta when expelled to see that no portion of it is left behind, as it will soon decay and be a source of danger to the mother. When twins are born, there will be two placentas, one for each child. These may be, and usually are, joined together, but sometimes separated by a thin membrane, as will be seen in the foregoing cuts.

**Application of the Binder.**—Unbleached muslin makes a very good bandage, and should be wide enough to reach from below the breast to the hip bones or trochanter, and should be pinned securely with safety pins, the pinning begun from above downward. When necessary to make compression over the uterus, take two or three towels, fold them together until they are thicker than the wrist, place them just above the uterus and pin the bandage over them. The woman can now be washed or sponged, being careful not to expose too much of the body at one time. The soiled clothing may then be removed and the dry end of the



sheet and blanket drawn across, and the patient made as comfortable as possible.

**To Preserve the Form After Childbirth.**—It is important to all mothers who can to have graceful movements and harmony of outline. The habit of getting up too soon after confinement leaves the walls of the abdomen pendulous, soft and flabby, and, unless it is supported by some snug, close-fitting bandage or abdominal support, the woman will be sure to lose her shape. Those who care to have a good shape and can take the trouble of staying in bed two or three weeks after confinement, and then, upon resuming the erect position, can wear a bandage for several months afterward, will be rewarded by having the abdomen assume a natural shape. A loosely pinned towel will not do, however, as it gives little or no support and only increases the amount of weight of the clothing as well as heat. Gentle frictions daily of alcohol and camphor, or tannic acid, and alcohol and whisky, will harden the muscles and the friction will increase their strength and tone and relieve any remaining tenderness or soreness.

## THE BABY.

**To Wash the Child.**—The vernix caseosa should be softened and removed with the yolk of an egg, or some oily substance, such as sweet oil, vaseline, lard, etc. The bath should be about ninety-eight degrees—blood heat. A fine soap should be used to cleanse the child, as the common article is more apt to irritate the skin. After bathing and drying the child the cord should be dressed.

**To Dress the Cord.**—Cut off the cord at the point where it is ligated, squeeze out the gelatinous substances, and then apply the new ligature. Just over the cord put some powdered salicylic acid or iodoform. Take a fold of absorbent cotton and wrap the cord and place it on the left side, where it can be retained in place by the binder.

**Application of the Child's Band.**—This bandage should be composed of firm, soft canton flannel, and when first applied, be loose, to allow for the increase of the pulmonary capacity.

**The Baby's Outfit** should be composed of various articles, such as a simple rice powder or pulverized starch, one cake of castile or spermaceti soap, and such other articles as an experi-



enced nurse may deem necessary. The following have been found to be of practical use : A soft sponge, brush and comb, bottle of white vaseline, powder box and puff with talc powder, skein of white embroidery silk, pin cushion, sharp pair of pointed scissors, large and small safety pins, pair of socks, some old fine linen, flannel or knitted band, flannel shirt, a flannel skirt or nightgown for the infant, a piece of extra flannel or afghan in which to wrap the child, also a piece of old flannel or blanket to receive it in. A baby could use eight day dresses, eight white skirts, seven or eight nightgowns, five day flannel shirts and five night flannel shirts, five pairs of day socks, four pairs of night socks, seven flannel shirts, seven flannel bands, four dozen small linen diapers, three dozen large cotton ones, and at least three little knitted sacks.

## ANTISEPTICS.

**Puerperal State and Labor.**—During labor and the puerperal state the following precautions should be taken against septic infection :

**The Lying-In Room** should be well ventilated and free from septic germs, such as scarlet fever, diphtheria, erysipelas, cancer of the uterus in an advanced stage or any ulcerated disease, as they are especially liable to cause septicæmia. All soiled clothing and evacuations from the bowels and bladder should be immediately removed from the room.

**The Nurse** should not have attended recently patients suffering with diphtheria, scarlet fever, erysipelas, puerperal septicæmia, or any other suppurative diseases, and she should be entirely free from all skin diseases, especially of a suppurative nature, as well as catarrh, leucorrhæa or any ulcerative disease.

**Preparation of the Physician's Hands.**—Before making any examination, per vaginam, he should carefully disinfect his hands by thoroughly washing them with warm water and soap (which should be always ready and waiting, as well as clean towels), being careful to clean from under the nails by using a nail brush, after which he should soak them in a solution of corrosive sublimate (one part to one-thousandth parts of water), and the nurse should be compelled to use the same precautions. The instruments should be sterilized, by placing them in boiling water (which should also be kept in readiness).



**The Mother** should be given a warm bath at the beginning of labor and the external genital organs thoroughly washed with a solution of corrosive sublimate ; one part to two-thousandth parts of water. Should labor be prolonged, an injection per vagina of warm solution of corrosive sublimate (one part to three-thousandth parts of water) should be given, immediately followed by washing out the vagina with warm distilled water. These antiseptic vaginal injections are especially indicated in the interest of the child when the mother is suffering with gonorrhea or purulent discharges, as a prophylactic measure against the occurrence of ophthalmia neonatorum (sore eyes of infants). After the delivery the vagina should be washed out with the antiseptic solution and the external organs cleansed in a similar manner. The external organs should be washed twice daily, with a solution of corrosive sublimate, one to two-thousandth parts water. Only one antiseptic vaginal injection is indicated after labor, unless there has been tearing of the soft parts ; and the vagina should be irrigated twice a day and the tears, if slight, dusted with iodoform, but if serious, sutures must be taken at once. The vulva should be protected by a napkin which has previously been dipped in and squeezed out of a warm solution of corrosive sublimate, one part to two-thousandth parts water.

### DYSTOCHIA.

**Deformities of the Pelvis—How to Diagnose Them.**—Notice the general appearance of the body of the patient or if any ankylosis of the joints exist. Examine the spine and see if there is any abnormal curvature of the hips and if the hips are on the same level. If there has been a deformity in infancy, it was probably rickets, and the lower limbs will generally be found bent, and as a rule you will find a deformed pelvis. If the deformity manifests itself late in childhood, it was not caused by rickets, and the pelvis will likely be normal. If the patient has any lameness, find out the cause and the age when the deformity first occurred. Get a history of the patient as to the diseases of infancy and childhood ; at what time walking began ; as to any congenital or acquired deformities. Inquire as to the injuries of the spine or pelvis ; also as to whether she has been previously pregnant and as to her labor, whether artificial or natural ; also as to whether the child was delivered living or still-born.



**Certain Signs.**—These signs are determined by pelvic measurements. The pelvimeter is an instrument with which these measurements are made. A physician should determine with his hands the size of the illiac bones, the position of the hips, the depth of the illiac fossa, the position of the pubic symphysis, also the width and curve of the sacrum, by the pelvimeter, the distance between the anterior, superior processes of the illiac bones will be found to measure ten inches, that between the illiac crest, eleven inches, and between the great trochanters, twelve and a half inches. If these measurements are normal there will be no lessening of the transverse diameters of the pelvis. The circumference of a false pelvis is thirty-five and one-half inches. This measurement may be determined by placing the end of a tape measure at the spinous process of the last lumbar vertebra, and carry the tape along the crest of the illiac bone to the middle of the pubic symphysis, and in the same way the other side of the pelvis will measure by adding together these results, thus the circumference of the entire pelvis is determined, and if one side of the pelvis measures more than the other, it is symmetrical. We can also see any want of symmetry of the pelvis by measuring the distances from the trochanter of one side to the illiac crest of the other.

**The Internal Measurements.**—The index and middle fingers of the left hand are introduced into the vagina and carried upward and backward, until they touch the sacro-vertebral angle, then the nail of the index finger of the other hand marks the point of contact of the internal hand of the sub-pubic ligament. The fingers are now withdrawn, at a distance of this mark to the tip of the finger measure, will give the measurement. The outlet measurements are of less importance than those just described. To determine them, the antero-posterior diameter, the patient should be upon her left side, and with the index finger of the right hand, the thumb placed external, and the hand introduced into the vagina, include between them the sacro-coccygeal joint. The tip of the finger is kept pressed against the joint, by the point of contact with the sub-pubic ligament, is marked by the nail of the index finger of the left hand, then withdraw the finger and the distance measure. To measure the antero-posterior diameter, one knob of the pelvimeter is placed externally over the sacro-coccygeal joint, while the other is pressed against the under



surface of the symphysis pubis. By subtracting from this measurement, one to one and a half centimeters, the actual diameter will be obtained.

**The Diagnosis of a General Contracted Pelvis.**—If all the measurements are found below normal in a male pelvis, owing to thickness of the bone, the distance between the iliac crests and the anterior superior spinous processes of the iliac bones, will be found slightly altered. or even normal.

**To Diagnose a Flat Pelvis.**—The external conjugate is always lessened, the normal being three and one-third inches. Transverse diameters and circumference of the false pelvis are always normal.

**The Diagnosis of the Simply Flat Rachitic Pelvis.**—There will be a history of rickets, and evidences of a disease will be found in other portions of the skeleton. The external conjugate is always shortened, and the true conjugate is diminished. The distance between the anterior superior spinous processes and between the iliac crest are equal. In some cases the distance between the former exceeds that of the latter. The anterior posterior and the transverse diameters of the pelvic outlet are large, compared with the deformities of the superior strait.

The X Rays have lately solved this problem satisfactorily, and any deformity can be easily photographed, and in case deformity exists, premature labor can be induced, thereby saving the life of the child and suffering to the mother.

## MONSTERS OR MONSTROSITIES.

Unnatural or deficient development in portions of the foetal body, causes deformities so unnatural in appearance that they are called monsters.

**Causes.**—Anatomical peculiarities of the child are often produced by mental impressions, such as shock from witnessing sudden and horrible deaths from accidents, received on the mother's mind during pregnancy. These monsters are divided into parasitic monsters, single monsters and double monsters.

**Single Monsters.**—Where there is a want of development of one or more of the extremities, there are ectromelic monsters. Where there is a normal development of the hands and feet,



atrophy of the thighs and arms, are called phocomelus. When there is a normal development of the arms and thighs, with a smallness of the other segments of the limbs, feet, legs and hands, it is called hemilus. When there is an arrest of development of all the extremities, hands, arms, legs and feet, it is called ectromelus. When there is an effusion of the extremities in a median line, more or less complete, they are called symelic monsters. When there is not complete fusion, extremities terminating in two feet, two hands, it is called symelus. When there is complete fusion, the extremities terminating in a single hand or foot, it is called uromelus.

If the extremities terminate without feet or hands, it is called siremenus. Where the skull is imperfectly developed, allowing the brain to protrude outside of the cranium, they are called exencephalic monsters. Where the brain is almost entirely external to the cranial cavity, situated in the occipital region, it would be called notem-cephalus.

Where there is an opening in the frontal bone, and the brain protrudes, they will be called protem-cephalus.

Where there is a fissure in the vault of the skull, the tumor pedunculated and the brain protrudes.

Where the upper part of the cranium is almost entirely absent the occipital bone, the upper part being lacking, and the brain being placed almost entirely outside the cranial cavity, it will be called hypern-cephalus.

Where there is an opening in the occipital bone and the brain protruding, imien-cephalus.

Where there is a vertebra fissure, and the brain protruding for a greater part outside of the cranial cavity, it is called exem-cephalus. Where the head has neither forehead nor vertex, and is sunk between the shoulders and surmounted by a blood tumor, the vault of the cranium absent, and the brain substance almost entirely lacking, it is called peseuden-cephalus.

**Anemcephalic Monsters.**—Where the brain and cranial vault are absent, where there is an arrest of the entire vertebral column, which is open in the form of a furrow, and the cord absent, it will be called anem-cephalus.

When there is an arrest in the development of the cervical and of the upper dorsal vertebra, the brain and cranial vault are



absent and the occipital foramen is lacking, that will be called *deren-cephalus*.

**Syclocephalic Monsters.**—Where there is more or less atrophy or absence of the nasal apparatus, the eyes approach the median line and are rudimentary ; sometimes they are fused into one.

When there are two eyes, nose not entirely absent, and there are two incompletely formed nostrils, or two into one, it is called *etho-cephalus*.

When there are two eyes and the nose entirely absent, it is called *cebo-cephalus*.

When the nose resembles a tube or trunk and the eyes occupy the median line, or the eyes fused into one, the nose having but one opening, then it is called *rhino-cephalus*.

When there is but a single eye situated in the median line, and the nose completely atrophied, it is called *cyclo-cephalus*.

When there is a complete absence of the head, it will be called *acephalic monster*.

**Double Monsters** are called *ensomphalic monsters*. These are each practically complete, although united, and are able independently to accomplish all vital functions. During uterine life each has its umbilical cord. Where the backs are united they are called *pygo-pagus*.

If united by the forehead to the forehead, or the vertex to the vertex, they would be called *meto-pagus*.

Where the heads are fused, forehead to vertex, or vertex to forehead, they are called *cephal-opagus*.

**Monomphalic Monsters.**—These are characterized by two complete individuals, as the common umbilicus, or where they are united by a ziphoid cartilaginous epigastrium (Siamese twins are an example of this condition). The two chests or the chins may be united, and we have different names, according to the points united. When united by the ischium bones, that would be called *ischi-opagus* ; when united by the sternum, called *sterno-pagus*.

**The Sycephalic Monsters.**—Where there is a fusion of two heads, or one large head with two faces looking in opposite directions, or one trunk and four upper extremities, or the face may be entirely absent, except the ears, which are fused or placed very near each other.



**The Mona-Sephalic Monsters** consist of the head without any external trace of the union ; the two bodies fused in a more or less intimate manner. The bodies may be united above the umbilicus, then there will be three or four upper extremities and four lower extremities. The body may be united above the umbilicus and below it as far as the pelvis, and there may be a single pelvis, with four upper and four lower extremities.

**The Sysomic Monsters.**—If the two heads remain separate there will be more or less union of the two bodies. There will be two thoracic cavities and two heads, abdominal and pelvic cavities are united, there are only two lower extremities, with an occasional rudimentary one.

**The Monosmic Monsters.**—These have practically but a single body with two heads. The heads may be complete or the faces may be close together, or may have separate mouths, or one with a common opening ; the number of eyes will vary if the heads are fused.

**The Parasitic Monsters.**—There may be but one head with upper and lower extremities, and the parasite is attached to the front abdominal wall of the principal foetus. The head of the parasite is absent, and receives different names according to the location of the parasite, which may be united to the maxillary or to the front of the stomach.

## THE OPERATION OF CÆSAREAN SECTION.

Cæsarean section is a term applied to the operation of making an incision into the abdomen and the uterus, in order to artificially deliver a foetus. Such operations have further objects :—The saving of the life of the mother and child, or the saving of the life of the mother at the sacrifice of the life of the child. The same operation could be performed after the death of the mother from accident, in order to save the life of the child. The indications for this operation require special consideration. There must be such disproportion between the birth canal and the size of the foetus, that the delivery of the latter is impossible. The consent of the mother, or in case of her being unconscious, then that of her nearest relative must be secured. The child must be living and viable. She must have no pathological disease which



will prevent the healing of the incision, neither must she be infected by septic infections. When these conditions are present, the success of the operation will depend upon three conditions :— A faithful observance of antiseptic precautions ; the co-operation of at least one intelligent assistant ; perfect inclosure of the uterine incision. Although this operation was performed successfully by the ancients, it is only of late years that it has again been introduced into general practice.

In regard to the antiseptic conditions, the physician should wash his hands with an antiseptic solution or carbolic acid, (a drachm to a quart of water); he should also antisepticize his instruments and appliances. The abdomen of the patient should be scrubbed with soap and water, then with ether, followed with a corrosive sublimate wash. If it is necessary to wash out the abdomen, it should be done with boiled water, at the temperature of 100° F., as no antiseptic fluids should be introduced into the abdominal cavity. The uterus can best be disinfected by tamponing with iodoform gauze, allowing the ends to emerge through the vagina. The nurse and the assistant should also observe strict antiseptic precautions.

**The Patient** should take no solid food for at least a day before the operation ; the bowels should be thoroughly emptied, the vagina should be washed out with an antiseptic solution, and if any suspicious discharge from the uterus persists, the vagina should be tamponed with iodoform gauze.

**The Assistants Should Never be Less than One nor More than Three.**—One for the administration of the anæsthetic ; one to devote his attention to the resuscitation of the child ; one to hand instruments and assist generally in the operation.

**The Instruments Needed** are one or two scalpels, half a dozen hæmostatic forceps, needle holder, two sizes curved needles, two or three feet of stout rubber tubing, half inch size, catgut sutures of best quality. At the time of the operation, the nurse should have bottles filled with hot water, aromatic spirits of whisky, ammonia or brandy, solution of ergotine, preparatory for hyperdermic injection ; solution of morphine and tincture of digitalis.

**Pitchers and Basins for Washing Sponges** used to irrigate the abdominal cavity, also a syringe with suitable tubes to give vaginal douche, small tub filled with hot water, for use in resuscitating the child.



**Operation.**—The period of labor preferable for the operation is at the end of the first period or when dilation is nearly complete. Make an abdominal incision four or five inches in length, over the portion of the uterus which it is desired to enter. After the peritoneum has been incised, the operator may decide upon two courses: one, is to enlarge the incision sufficiently to turn the uterus forward out of the abdominal cavity, or he may decide to make his incision into the uterus as it lies in the abdomen. If the uterus is turned out, towels rung out of boiled water and warm, should be laid over the intestines, back of the uterus and upon the abdomen, so that the uterus can rest upon it.

**To Control Any Hemorrhage.**—An assistant takes hold with his hand and makes compression on the lower segment of the uterus, or the neck of the uterus may be encircled with a rubber tube; the operator should then insert his hand through the opening, grasp the child by the feet and withdraw it; at the same time evert the uterus. At this stage of the operation, the assistant presses the abdominal wall closely against the uterus and the contents of the uterus is then removed, after which a towel is placed behind it, to protect the bowels. The placenta is now detached from its attachments with the fingers and removed from the uterus; then wash out the cavity with a corrosive sublimate solution, (about one to four thousand), and then apply the iodoform. The uterine opening is now closed with the suture which must be placed closely together and down to, but not through the decidual membrane. The rubber tube is now removed from around the neck of the uterus, and if any bleeding occurs, an additional suture should be introduced along the line of incision. The uterus should now be cleansed with an antiseptic solution, and iodoform dusted along the line of the incision and then returned to the abdominal cavity. If any fluid has escaped into the abdominal cavity it should be washed out with hot, distilled water, which should have been previously boiled. The abdominal wound is closed up and the dressings applied in the same manner as in other abdominal sections. Several hyperdermic injections of ergotine should be administered. In fifteen days the stitches should be removed from the abdominal incision. In thirty days the patient may go about, but should wear an abdominal bandage.

**Prognosis in Caesarean Section,** if antiseptically performed, gives nine chances out of ten for recovery.



## POST-PARTUM HEMORRHAGE.

Hemorrhage after delivery, is divided into primary, when within six hours after delivery, secondary, after the first six hours, and before the end of the first month. The causes of primary hemorrhage are tears, neoplasms of the uterus, want of proper uterine contractions. This may be dependant upon a feeble constitution, a rapid or slow labor, anæmia, albuminura, imperfect development in the muscular fibres of the uterus or predisposition to hemorrhage.

**Symptoms.**—Hemorrhages usually come on suddenly, without warning. There are no premonitory symptoms; occasionally, however, the patient may complain of thirst, and become restless and have a slight increase in the rate of the pulse. It may be internal where the neck of the uterus remains contracted and the blood damming up inside. Externally, where usually both of these conditions exist. Upon palpation, over the abdomen, the examining hand no longer feels a hard resisting body. The uterus may be enlarged, soft and light. The patient, unless treated promptly, rapidly sinks and dies for the want of blood.

**Treatment.**—Raise the foot of the bed, take away the pillow and bolster and lower the patient's head. If hot water be not present, introduce one hand into the cavity of the uterus, and put the other hand over the abdominal wall, firmly kneading, and pressing the uterus with the external over the internal hand. As soon as the hot water arrives, inject it into the cavity of the uterus with a fountain syringe. While the uterine contractions are being excited, the assistant should administer a hyperdermic of ergotine. Electricity, using faradic current, is the most scientific and prompt means to stimulate uterine contractions. Injections of vinegar have been tried with success. Immediate effects of the hemorrhage should be overcome by a bandaging of the lower extremities, so as to force the blood to the head and heart; transfusion of blood or milk, or a saline solution, may often be necessary.

**The After Treatment** consists in the administration of ergot and opium, good nourishing diet given in small quantities, and often repeated. If the stomach will not retain the food, nutrient, enemata are called for, a little brandy or whiskey is indicated. A compression of the uterus is made by means of towels, as described in management of labor.



## THE PUERPERAL STATE.

Labor ended, the lying-in period begins. This is understood from the time in which the woman is recovering from the effects of her labor. No limit can be set for the puerperal period. The savage woman recovers from her labor sufficiently to resume her usual avocations in a few days, while the civilized, but weaker, sisters require several months to fully recover from parturition.

**The Lying-in Period** applies to the time before the patient engages actively in her former pursuits, but especially to the time which the patient is in bed.

The phenomena of the puerperal period are those connected with the process, by which the uterus and the genital tract are reduced in size from their hypertrophied, or enlarged condition at labor to their normal proportions. The process is called involution; the abdominal muscles, which have been strained and distended during pregnancy assume their former consistence and contractile power. The enlargements of the glandular and secretory organs of the patient gradually give place to the usual conditions obtaining in these parts. These changes may be styled retrograde or absorptive changes and at this period occurs the establishment of lactation, (the secretion of milk). It will be seen that the changes of involution result from a large amount of material being removed from the body. The organs have multiplied their cellular elements and must now be returned to their normal condition, which can only be reached by eliminating the excess of material. The uterine muscles, multiplied glands, the lining membrane of the uterus take on fatty degeneration. Material, thus produced, is removed from the body by the different channels of elimination. This fatty material in the blood produces an increased amount of heat, sometimes slight, but there is always habitual rise of temperature, during the week or ten days of the puerperal period. The labor being over, a sense of physical comfort and an increase of appetite commonly occur, which persists throughout the puerperal period. The lactations in the genital tract heal during this time, the pigmentary deposits on the face are slowly absorbed and destroyed, a gain in weight and an increase in the development of the woman will follow parturition. The breasts have become somewhat enlarged by the turgid condition of the mammary glands during pregnancy, but the for-



mation of breast milk does not take place until a number of hours, even two or three days after delivery; the milk may then come into the breasts with a rush; they become distended, reddened from a general hyperæmia and frequently the neighboring lymphatics show a temporary engorgement. The pelvic floor, and the over-distended tissues of the perineum regain their elasticity to a considerable extent. However, there always remain certain degrees of dilatation sufficient to make the diagnosis of the previous parturition. At this time the patient is peculiarly susceptible to the influences of infection, she is liable to attract the exanthematous diseases, such as scarlet fever, measles, also septic infection from polluted air or unclean surroundings.

**The Nervous System** shows immediately afterward an unstable state which renders the patient easily disturbed by emotions, and undue mental emotions interferes and causes a rise of temperature, also interferes with the function of lactation.

**Treatment.**—The treatment consists in surrounding the patient with such an environment that the danger of infection may be easily reduced to a minimum, so that the process of absorption and repair will be disturbed as little as possible and furthered in every way. Rest is of great importance. To secure against infection, a room should be clean and not connected with any channel leading to decomposing material. Her clothing and bed should be absolutely clean. The effete material removed from her body by the intestines and kidneys should be promptly disposed of. The lochial discharges should be disposed of in such a manner as to prevent its decomposition. The air which the patient breathes should be pure, fresh and frequently renewed. Keep the bowels regular. Water should be freely taken to encourage the kidneys to act. A daily bath should be taken, followed by gentle massage to keep the skin acting. Keep the patient quiet and at rest. Very few visitors should be allowed. To absorb the lochia and to prevent absorption, old cloths wrung out of an antiseptic solution, dried and applied to absorb the lochial discharge, and, as soon as soiled, burn. In such cases where specific poisons have existed in the system, special care should be taken as to cleanliness; antiseptic solution, (one to three thousand) should be used by means of the vaginal douche, twice daily and the external genitals bathed with the same solution; when it would be necessary to use a catheter, it should have been



soaked in the same solution, previous to its introduction, and the discharges immediately taken away from the patient. When there has been no specific inflammation, it will be unnecessary to use but one vaginal douche, and that immediately after delivery.

### SECONDARY HEMORRHAGE.

Secondary hemorrhage is due to a retention of a part of the placenta or membranes; occasional displacement of the uterus will give rise to the disorder, relaxation of the uterine muscles, long labors, etc.

**Treatment** is the same as that already laid down for post-partum hemorrhage. Empty the uterine cavity of any foreign substance it may contain, correct any displacement of the uterus, which may exist as a cause. Ergot and quinine should be given for several days. The after treatment is the same as for post-partum hemorrhage.

### PUERPERAL SEPTICÆMIA.

This is an acute contagious febrile infection attending childbirth. It is a most deadly complication of labor.

**Causes.**—The introduction of disease germs from without, the exact nature of which is not known. It is more frequent during the winter season, on account of want of proper ventilation and personal cleanliness. It is more frequent in primiparæ (first pregnancy) than during succeeding labors. The cause has a greater liability to tears of the soft parts, and in such cases, where the labor is longer, there is more interference on the part of the physician. It occurs in three varieties: The benign (simple), the grave form and the latent form.

**Symptoms.**—In the simple form it begins about the third day after labor with a chill, more or less severe, followed by a fever, the temperature reaching 104. It then falls to 102 and remains at this point, with an evening rise, for from seven to ten days. The lochial flow is offensive and diminished in amount, or entirely arrested. Any offensive odors in the matter after recent delivery should excite suspicion of septicæmia. If the disease begins before the third day, the secretion of milk is prevented; if after the third, it will be diminished in amount. The pain is severe, and is felt in the lower portion of the abdomen. In some



cases a swelling may be felt at the side of the uterus. There is an arrest of the process of involution; there is an irritability of the stomach, nausea and vomiting, and, as a rule, constipation exists. As a rule, there is no albumen in the urine.

**The Grave Form,** begins with a chill within the first two days after confinement. The intestines become distended with gas, and pressure upon the abdomen gives severe pain; the breathing is short, frequent and shallow; thirst is excessive, the tongue is cracked and parched; nausea and vomiting, and the pulse runs from 100 to 110; the fever reaches from 104 to 106, with no morning decline; the urine is scanty and high colored, and contains albumen; diarrhœa is frequent, and the discharges offensive and dark in color, sometimes becoming so profuse as to produce a condition of collapse. The mind, as a rule, remains clear. Death may terminate the disease within thirty-six hours, but it is usually delayed from five to ten days.

**The Latent Form** begins with a chill four or five days after delivery; sometimes two or three weeks. The temperature reaches 104 or even higher, then falls to normal, followed by perspiration. The lochials are sometimes deranged, usually normal; there is a small trace of albumen in the urine; there is no pain or swelling in the abdomen. Day after day and week after week the chill occurs, with a rise of temperature, and finally the disease terminates in recovery, or the patient may pass into a typhoid state. This form has been often mistaken for malarial fever.

**Treatment.**—The treatment consists in removing the cause by means of antiseptic washes. If there is any retained placenta, curetting and irrigating the cavity of the uterus, or if there has been any tears or rents in the perineum, the stitches should be removed, and the womb reopened and disinfected.

For vaginal injections, corrosive sublimate (one to two thousand); for uterine injections, one to three thousand. In using the intra-uterine injections, care should be taken to guard against the entrance of air; and after the uterus and vagina have been washed out with an antiseptic solution, a wash of boiled or distilled warmed water should be freely used, to guard against poison from corrosive sublimate. These injections may be used two or three times a day, according to the necessities of the case.

**Constitutional Treatment** is directed to reduce the tempera-



ture : Antipyrine, quinine, whisky, salicylic acid or salicylate of soda, ten to twenty-grain doses every four hours. If quinine is used, ten to fifteen grains are used every four to five hours ; if antipyrine is used, it may be given in ten to fifteen-grain doses, and, if there is not a decline in the temperature, repeat the dose. To relieve pain, hyperdermics of morphia or twenty or twenty-five drops of laudanum ; not to be repeated under four hours. To cause sleep, use opium chloral, ten-grain doses, or fifteen grains of bromide of potash dissolved in water. To relieve the vomiting, counter-irritation in the form of a mustard draft applied over the stomach, or a hyperdermic injection of apo-morphine. Pieces of ice held in the mouth, lime water, hot water at frequent intervals and in small quantities often relieve. For the distention of gas in the intestines : Turpentine stupes and cold applications to the abdomen, rectal injections of salt water, or the tincture nux vomica, in about three-drop doses, every three or four hours. To keep the bowels moving, an injection of salt and water, or some mild laxative, or small doses of calomel, about one-fourth grain, every three or four hours.

**Food.**—The patient should be given easily digested and nourishing food—milk, broth, soups, beef tea, chicken soup, etc.

### WHEN THE CHILD SHOULD NURSE.

After the mother has been washed, and the bed rearranged and dried, and when she has had a good nap, the child being already washed and dressed, the mother may then turn on one side and receive the child upon the arm of the side upon which she is lying, and the child put to the breast.

This is the most sacred moment in the life of the woman. With the birth of this new child is born a new love. A new being has come into the world, which is a part of herself. She now looks upon this little helpless being and realizes that it is hers and his, to whom she has given all on earth. This new soul, now brought into existence, whose life must go on and on, through eternity ! If she be a mother with a true heart, such as the Creator giveth, she will look to Him and ask for guidance and protection of her new-born child, and thank Him for so precious a gift. Little does she know what is in store for this little being, but, as she has seen others as dearly loved as her own who have been anything but a help to their mothers and the world, she will



only hope for the best and begin to put forth every effort to bring to pass all that will make him or her a perfect man or woman, as the case may be. She examines carefully all the features of the child, to see that they are perfectly formed, and if they are, she only hopes that the future may develop as perfect a moral nature as its limbs now appear to be.

**The Mother's Milk** at this time is intended by nature to act as a laxative upon the new-born child, and is the method of getting rid of the materials which have accumulated during the latter months of pregnancy. Applying the child to the breast acts as a stimulant to the uterus, causing contractions of the womb, and at the same time unloads the milk vessels of the heavy and thick secretion, preparing the breasts to receive the milk, which is to appear about the third day. This secretion will meet all the wants of the new-born child until the flow of the milk is established.

**Directions for Nursing.**—Every mother should nurse her own child, unless prevented by flattened or misshapen nipples, or some chronic wasting disease, such as consumption, syphilis, scrofula, epilepsy. Even then she should nurse throughout the puerperal state. The mother and child are both benefitted by the drawing away of these fluids. Inflammation and ulcerations of the breasts are prevented; it also provides another method of elimination, thereby aiding nature in the process of involution. After the mother is up and attending to her usual avocations, the advisability of continuing the child to the breast will depend largely upon the quality and quantity of the milk secreted and whether or not the mother is able to make the necessary sacrifices in the interest of her child. Weighing the child from time to time will be found to be of advantage in determining whether the milk contains sufficient nutrition to sustain life. During the first week of its existence the child will be found to lose in weight, but during the last part of the first week, or the beginning of the second, it will begin to gain, frequently averaging two ounces each day. In case it does not thrive and gain in weight, or if the mother's health be bad, or the drain upon her be too much, other means of support must be provided.

**Insufficient Supply of Milk.**—For some unknown cause, all mothers cannot furnish a sufficient quantity of milk, while



others will be able to supply a large amount of the fluid, but the quality will be poor, and insufficient in nourishment to properly sustain the child. This condition is usually found in large cities among the working class, where the women are compelled to be away from their children the greater part of the day. This causes an irregular flow, hence drying up of the milk; it may also be caused from the want of proper and nutritious diet; over-work or excessive exercise also affects lactation. Some women ordinarily secrete a sufficient supply of milk, but when subject to any unusual amount of exertion, such as cleaning house, washing, etc., the supply will be diminished. Then again the women who began to bear children late in life, will usually have less milk than those who began earlier.

**Treatment.**—If the quality is good and the supply insufficient, an increased supply may be gained by strengthening the breast. Frequently applying the child will sometimes be all that is necessary. Manipulation of the nipple between the thumb and finger is also good; improving the mother's health by exercise in the open air; change of surroundings; personal cleanliness; good, nourishing diet, such as meats, cabbage, eggs and fish is best for weak, thin and pale women, while the corpulent should take plenty of exercise, and use only lean meats, no sugars, starches, saccharine vegetables, such as beets and potatoes, and she should limit herself to three pints of water or other fluids, a day, and those who are lean may drink beer, cider and slippery elm tea, while a diet of fats and starches may be found useful. For those who are troubled with deficient lactation, milk drank between meals and combined with oatmeal and buckwheat, have a well-deserved reputation in increasing the supply of milk. The fluid extract of jaborandi in doses of half teaspoon to one teaspoonful, three times per day, will be found sufficient to increase the flow. The tincture of poke root in doses of 3 to 4 drops given three times daily, or the household remedy of poke root poultice is good.

**To Arrest an Excessive Secretion of Milk** it is necessary to lessen the supply of milk when the quality is poor or the quantity is in excess. When this condition exists there is a continual leakage which renders the mother uncomfortable from the saturated condition of the clothing, also the heat and distention of the breast after delivery is a great source of annoyance. To remedy



this condition a belladonna plaster applied to the breast, or a liniment composed of belladonna, camphor and a little sweet oil can be used.

This can be made by taking four drachms of camphor, add a few drops of alcohol to cut it, then pulverize. Now add two drachms of the tincture of belladonna and about four ounces of sweet oil. This is especially useful when the glands are hard and lumpy. It should be gently rubbed on the breast until it is thoroughly rubbed in. A very good liniment for relieving pain may be composed of the following:

*Phytolacca decandria* (poke root), one ounce to four ounces of strong tincture of camphor; one and a half ounces of laudanum, and about two tablespoonfuls of soft soap, applied every three or four hours. If there is a tendency to abscesses, the fluid extract of belladonna may be given inwardly, in three or four drop doses, or the fluid extract of poke root, five to fifteen drops every four hours. Hot applications have been found useful. Among the very best is hot batter cakes applied to the breast, and removed as soon as cooled, and repeated, it will bring immediate relief in some cases.

**Diet.**—All fluids should be avoided as much as possible—cabbage, turnips and soups, etc.—as they have a tendency to increase the quantity of milk. The food should be solid in character, and eaten comparatively dry. Some good tonic should be administered, such as the elixir of gentian and iron, taken in teaspoon doses before regular meals. In cases of excessive nervousness in the mother, the fluid extract of celery, combined with a little phosphate, or cherry phosphate, will be of service.

**To Overcome Congestion of the Circulatory System** give broken doses of epsom or Rochelle salts.

**To Start the Flow of Milk.**—Whenever it is desired to renew the secretion of milk, the following will be found of service. The administration of the fluid extract of jaborandi in 15 drops to half teaspoonful doses every 4 hours combined with suction by means of the breast pump, or the mouth of the infant or the nurse; application of a decoction of castor oil plant leaves, (hand full of the fresh leaves to a quart of water), and the breasts may be bathed with it for 15 or 20 minutes, afterwards taking the leaves and making a poultice of them and letting remain on the



breasts until it dries is a practice that is very often all that is necessary. This may be repeated every 2 or 3 hours until the flow is established. Electricity, the faradic current, passed through the gland for 15 or 20 minutes three or four times a day, has been found very useful where there has been a suppression of the milk from any cause. A full dose of epsom salts, to produce a free evacuation from the bowels will also aid in restoring the flow of milk.

## INFLUENCES UPON THE FLOW OF MILK.

**Relations of Nursing Wife to Husband.**—During the lying-in period, which lasts about a month, there should be no sexual intercourse, nor until there has been a perfect restoration to the normal condition of these organs. After this period prudent cohabitation will be found to conduce to the health of the mother. However, some authorities insist upon a complete separation during the entire period of lactation.

**Influence of Menstruation.**—Menstruation, during the first eight or nine months subsequent to parturition, is suspended, but when it reappears there will be found to be a decided change in the properties of the milk, as well as diminution in the supply. At this time it may be found to disagree with the child, although in many instances the child will continue to thrive during the entire period of nursing.

**Mind Influences.**—Strong or violent emotions of any kind, such as intense grief, paroxysms of passion or mental anxiety, cause a deterioration in the milk. Children who are nursed by females laboring under intense mental anxiety, or intense grief, or during periods of public calamities, seldom ever thrive. Infantile vomitings, and even convulsions, have been known to result from allowing the child to nurse immediately after intense mental excitement of the mother. It will sometimes happen that the flow of the milk will entirely stop, due to some excitement of the nervous system, whether it be from intense grief or joy; and the safety of the child will sometimes require that it be taken from the mother's breast.

**Pregnancy Occurring During the Nursing Period** will be found to produce an alteration in the milk of the mother, rendering it unwholesome for the child. During the first two or three



months of pregnancy there will be very little change, but after this the health of the child will demand that it be weaned, or be given other food, such as milk from another nurse, or the milk from a cow, or even condensed milk, when cow's milk cannot be obtained or disagrees.

**The Time When the Child Should Be Allowed to Nurse.**—There can be no definite rule laid down upon this. During the first two or three days after birth the child should be allowed to nurse every two or three hours, and from the very beginning there should be some regularity in regard to the time, the intervals should be gradually increased, so that the infant will have sufficient time to sleep, and the mother a better opportunity to recuperate her strength. The breasts should be suckled in alternation, and the nipples should be carefully washed with water both before and after nursing.

**Composition of Milk.**—Milk is composed of water, holding in suspension fats, a solution of casein albumen, serum, milk, sugar and salts. Human milk differs from the cow's milk in containing more sugar and less proteids and fats. Cream is composed principally of albumen and globules of fat.

**Milk Turns Sour** through the action of a micro-organism (bacterium), forming lactic acid, and precipitating the casein and allowing the alkaline fluid to remain.

**The Changes Occurring in Milk in Different Periods of Lactation.**—Mother's milk prior to and just after parturition is known as colostrum. It is deficient in casein and contains an excess of serum and albumen, also corpuscles of colostrum. Towards the end of lactation there is an excess of serum albumen and lack of casein.

**The Value of Milk as a Food.**—Milk contains all the elements to sustain life, proteids, water, carbo-hydrates and salts. It will sustain life longer and better than any other single substance.

**Condensed Milk** is prepared by slowly evaporating milk by moderate heat. When carefully prepared it will keep for years if put up in hermetically-sealed cans. When opened, you may let it remain in the can for several days after the can is opened without doing it very much damage. It is freely soluble in water to any degree of dilution. It is largely used for the nourishment



of children, especially among the poor classes, who will thrive upon it for a time. Although they will appear fat, the flesh will be less firm, and they will develop poorly and are less liable to resist disease. When artificial feeding is to be resorted to, cow's milk is generally thought of, because it is more easily obtained. When it has been decided to use the cow's milk, a careful microscopical examination should be made, as much of the milk sold by dairymen contain disease germs. Consumption and typhoid fever are frequently contracted in this way. It is best to use only one cow's milk, and, when it can be obtained, a cow that has a calf near the age of the infant to be nursed is best.

**Clothing of the Infant.**—After the infant has been washed and dried, the cord properly dressed, and the bandage loosely applied, the diaper should be next applied into which a couple of folds of old soft muslin may be placed to receive (the meconium) the contents of the bowels, and these can be removed and burned, saving the trouble of washing. If at this time, the child should show any symptoms of exhaustion or weariness, it should be wrapped loosely in flannels and allowed to sleep.

**Temperature.**—It should be kept in a temperature similar to that to which it was accustomed before birth, viz., 96 to 98 degrees F. Great care should be given to the temperature as sudden changes will produce colic and indigestion.

**Coverings and Draught.**—The wrappings should be sufficiently loose to allow free breathing and free use of the organs and limbs.

**The Manner of Dress.**—In choosing the dress of the infant, softness, warmth and lightness of material should be taken into consideration, according to season and climate and it should be constructed so as to be easily put on and taken off. It should also afford ample protection to all parts of the body and yet loose enough to admit of free action.

If the child be born prematurely, or during the winter season, soft flannel is the best material for all parts, the covering which comes next to the skin. In case it should produce irritation of the skin, or excessive perspiration, cotton or linen material may then be used, using precaution in warming the garments before dressing the child. Comfort is the important consideration in constructing the child's clothing. Nothing should be allowed



which would in any way interfere with the free exercise of its limbs, nor compress the lungs or bowels. Remember that the child may be uncomfortable in an atmosphere which the adult does not consider at all hot or cold. Long robes are not objectionable for children for they protect the body from the cold air. In cold weather, stockings or moccasins should be used to further protect the feet and limbs. Heavy covering will not be required for the head unless the weather be very severe; and nothing at all indoors. If it be taken out, it should only have sufficient additional covering to keep it comfortable. The pernicious custom of some nurses of dosing the babe as soon as it is dressed with catnip or other forms of sweetened water is unnatural and uncalled for and should be avoided.

**The Infant's Food.**—The mother's milk will be found the best adapted to the necessities of this developing organism, and all that nature requires, but in case it should become necessary from any cause to use other nourishment than that obtained from the mother, milk from the cow will be found to be the most easily obtained. Cow's milk produces larger bones and bodies than milk from goats and small animals, as beef produces large bodied men. The food regulates to a degree the size of the individual. Cow's milk is a very good substitute for mother's milk, although stronger in saccharine constituents. The most convenient way of administering it is through the nursing bottle. The bottle should be well scalded and washed each time after using as well as the nipple and should be kept in cold water until used again, and it will be found to be preferable to any gruel, tea, or infant's food. At this stage of life, the digestive organs will not be prepared to digest vegetable food of any sort and it will seldom fail to irritate the stomach and bowels when it is given. When cow's milk is given, it should be at a temperature of 97° F. and it should be fresh every two or three hours and in quantities of two or three ounces, as in these quantities it will be easily digested. There is a great tendency to over-feed, but nature has prepared a way of getting rid of unnecessary food by producing vomiting when the stomach is overloaded. Over feeding also produces flatulence, griping and colic. The child should not be put to the breast every time it cries, it is not the cure for all infantile ills.

**Regularity in Nursing** should be observed from the earliest



state. The mistake should not be made that crying is only an indication of hunger, it is the only method known to the child of expressing pain or discomfort of any kind. The unpleasant sensations received from the external world, such as pain, cold, heat, pressure, hardness, noise, light and hunger affects it unpleasantly and to express this discomfort, it cries. The first impulse of the mother, when she hears the child cry is to stop it, and usually she takes for granted that it is hungry and applies the breast. She should also remember that there is two kinds of crying—crying from anger and crying from pain, or other unpleasant sensations. An intelligent mother will soon learn to distinguish between them. Three times a day will be amply sufficient to feed the child, and once or twice during the night. The mother should never get in the habit of allowing the child to nurse all night as she should be allowed undisturbed repose and she will fare better by a separation. The mother should keep herself in as perfect health as possible, so that her milk will prove nutritious and beneficial to the child. At night, she should have a little cradle arranged along side of her bed, so she can reach it to give the child nurse, by such an arrangement both the mother and child will be benefitted. She should be the master of the child and not the slave, and should regulate its conduct, and not govern her own by its whims and caprices. It should obey her will, and not her, its will. Begin at the beginning to train it and you will be surprised at the intelligence it will display.

**Sleeping.**—The earlier months of infancy are taken up between sleeping and feeding. The child is seldom awake and when it awakes, it is only to be fed. Having received its nourishment it will again fall to sleep. As the organism develops, the desire for exercise increases and that for sleep diminishes.

The baby should sleep on a cradle of its own, supplied with covering sufficiently light in weight to preserve a proper degree of warmth and should be heated to a proper degree before the baby is laid upon it. The cot should be protected from strong light, and should receive an abundance of fresh, pure air, care being taken to keep it out of a direct current. Regularity in sleep is of as great importance as regularity in feeding. Night is the time appointed by nature for sleep, and nothing should be allowed to come in the way of the child to prevent it from yielding to this inclination. It should be allowed to sleep as much as it desires. Chil-



dren under two years will require more sleep than can be afforded during the night, therefore, they should be allowed to sleep from one to three hours during the day. After the noon meal, will be found the time best adapted for this. If sleeping be deferred till later in the day, it will likely produce wakefulness during the night. If this noon-day sleep be continued until the child is five years of age, it will be found to be of benefit. A perfectly healthy infant should sleep eighteen out of the twenty-four hours, and the nursery should be prepared, so that all light and noise can be excluded. When a child appears restless and excitable, there is always a cause, in many instances the cause may be outward, but when no cause can possibly be found which will lead to the wakefulness, it will be inferred that the child is not well and a physician called.

**Soothing Syrups**, laudanum and paregoric, and the practice of administering them to children who are fretful and nervous, or crying should be condemned. Healthful repose is insured by having the sleeping robes and bed clothing freely aired each day. The clothing so aired will have a soothing effect upon the child and will produce sound and more refreshing sleep, which will amply repay for the trouble, by showing the improved condition of the health of the child.

## BATHING.

Bathing is the chief promoter of bodily health and comfort, the best time to bathe the infant is in the morning as soon as it is taken out of bed, before it has been put to the breast. In the first bathing of an infant, immediately after birth, the vernix caseosa should be softened and removed with the yolk of an egg, or some oily substance, such as sweet oil, vaseline, lard, etc. A fine soap should be used to cleanse the child, as the common article is more apt to irritate the skin. After bathing and drying the child the first time the cord should be redressed. In infancy, the child is more subject to heat and cold, reaction is slow and uncertain and there is great danger of catching cold. When the surface is cooled by water, infants become chilly and the extremities remain cool in a medium weather, air, or water, in which older children would be comfortably warm, and they are liable to contract sore throat, bronchitis, intestinal catarrh and other inflammations from very slight exposure. The daily bath should not



be continued longer than three minutes, and the temperature during the first months of infancy, up to the ninth month, should be a little above blood heat, or at least  $92^{\circ}$  which will be found to communicate a moderately warm sensation to the hand. After the age of eight or nine months, the bath may be reduced to  $88^{\circ}$  or  $90^{\circ}$  and should remain at about this temperature until the close of infancy, which is about two and a half years. After this time, it may be still farther reduced, so that children of eight or nine years may have it reduced to  $75^{\circ}$  or  $80^{\circ}$  (or summer heat).

Never bathe the child immediately after eating nor after vigorous exercise, when the pores of the skin are perspiring, as there is liability to cause congestion and colds. A tub with sufficient dimensions to afford complete immersion of the child is, by far, the best and most convenient method of bathing. They can be found in nearly all house furnishing stores in shapes to suit the purchaser. While the child remains in the water every part of the body should be carefully washed, so as to remove all impurities. If from lack of convenience general bathing be dispensed with, the infant may be washed from a basin or bowl. Cooler water may then be used, but a longer time to complete the bathing will evidently be required for this purpose. A soft sponge or napkin may be used. When the bath is completed, the body should be wiped dry with a soft cloth as quickly as possible, and the surface should be rubbed briskly with a flannel, or in case of older children, a suitable coarse towel, and the clothing replaced without delay, and to insure full reaction, exercise should be encouraged.

## LEARNING TO WALK.

When the child is five or six months old and is vigorous, it may be placed upon the floor on a soft mat or comfort. If healthy, it will naturally be of a restless disposition, and will toss its legs about, thereby developing the muscles which are soon to be brought into requisition. It will roll over on its stomach, reach out its hands, draw up its legs and stretch them out again, and very soon it will have learned to crawl. Its restless nature remains unsatisfied; it will lay hold of a chair, or some object, and will endeavor to lift itself upon its feet; it may fall but will persevere until it learns to raise itself upon its feet and stand, by holding on to a chair. It will soon lift his feet alternately, and then



replace them upon the floor; it will then push the chair from it, holding on with its hands, and draw itself to it, remaining in an erect position. After a few experiments it may let go of the chair and will then laugh at its ability to stand, repeating this experiment from day to day, until it has perfect confidence in itself, when it will let go of the support entirely, and stand alone, thus exercising every muscle of the body without fatigue. The bones and muscles are strengthened and made able to bear the weight of the body. It will now be but a short time until the child will be able to walk. Its first efforts should be carefully watched, not to afford any special assistance but to protect it from injury.

On account of the softness of the bones attempts to make the infant stand, at the age of four or five months should be discouraged, as this has a tendency to cause bow legs, and other deformities. The child itself will show a disposition to walk when it is prepared. Infants should not be out of doors until the age of three months and then only for a brief period and in the warmest part of the day, but in summer they should receive out-door exercise, after the first month; this is easily accomplished by means of the baby carriage. The face should have no covering by veil or other means; the air and light should have free access to it, taking care to exclude the strong rays of the sunlight, but in cold weather and during strong winds the protection of a veil is necessary. Rude shaking or jarring of infants should be forbidden. It does no good and often does harm.

Walking is the natural exercise during childhood, as it gives gentle exercise to all the muscles as well as promoting digestion, when not carried to the extent of fatigue. Gymnastic exercises for young children are too severe and involve too much danger of ruptured tendons or broken limbs. There is nothing better for children three or four years old than gardening or farming where facilities will allow it. For children four or five years old nothing will be found more beneficial than a little sand-pile. The ordinary household duties are always beneficial to children old enough to participate.

## EXERCISE.

Infants that are not old enough to stand will take exercise in a way that is harmless and natural. Let them lie on their back in the crib or on the floor, with a blanket under their body, and a pillow under their head. The clothing should be loose so as not



to interfere with the free movements of the limbs and the crib should be stationary, without rockers. A healthy infant will enjoy this attitude, moving all the limbs sufficiently to give them the required exercise and will show the delight and its appreciation by utterances which are as expressive as words.

### WEANING.

**Weaning** is not a matter of so much importance as it was formerly. The term of nursing will depend upon various circumstances, such as the health of the mother, or the child, abundance of milk, etc. Some women are not able to suckle more than six or seven months, while others could continue for two or three years and suffer no inconvenience. Mexican women adopt the practice of nursing their children to avoid pregnancy, but with only partial success. It will be found that nursing beyond twelve months is unnecessary for the child and positively injurious to the mother, in most cases. Weaning should never take place when the infant is unwell or suffering from teething and the season also should be favorable. Weaning should take place between the ages of ten and twelve months and if the mother's health be good and the milk sufficient, it will be well to defer weaning it until the canine teeth appear. At this time the infant will possess sixteen teeth, and will be able to masticate the softer kinds of solid food. Weaning should be gradual. The practice of weaning on a certain day should be discouraged, and should be only recommended under peculiar circumstances, as any abrupt change of diet is apt to derange the digestive organs, and will cause fretfulness and sleeplessness on the part of the infant for a week or more. Weaning should commence by feeding with a spoon a little oftener during the day, and by nursing less, and discontinuing the practice of suckling at night. The daily feeding for sometime previously will have, in a great measure, prepared the child for this change of diet, while it will rebel against sudden weaning which would increase greatly the care of the mother. Many lives are sacrificed in consequence of ignorance, or the danger of weaning. Children should not be weaned in warm weather, nor in the month preceding it. It is unlawful in France for any person to give solid food to infants that are less than a year old, except on the prescription of a physician. After the child is entirely weaned, if the breasts continue to act, and are



uncomfortably full, the milk may be easily squeezed out, or drawn off by the breast pump.

**Medicine for the Baby.**—The less medicine a child takes the better for its health. So long as the child is in health, the natural functions will be performed, according to his constitution, without medicine; and if the child be sick, the less tampering with medicines, by the nurse or mother, the better. The infant's bowels will move four or five times a day, ordinarily, gradually diminishing in frequency as the child grows older, to three, two or one evacuation a day. But we are not to insist upon this, as an invariable rule, and administer medicine until it is complied with. A dose of castor, or sweet oil, is usually given at birth, and may be repeated, if necessary, until the meconium is cleared away, and then nature should be allowed to take its course, and medicine should not be given unless there be sufficient reason. If the child appears uneasy and hot, and the bowels are confined, a dose of oil or rhubarb may be given, or a warm bath; but if the child exhibit no signs of suffering, there should be no interference. When the child is teething, a certain amount of irritation is excited, which may prove highly injurious; the most common and mischievous accompaniment is bowel complaint, and to prevent a worse evil it is advisable to administer an occasional dose of medicine to children who suffer from much flatulence, a little fennel water, or caraway-seed water, with sugar and plain water, may be given; or a carminative composed of rhubarb, magnesia, syrup and anise seed, or caraway seed, water, or milk of asafoetida. Beyond these the nurse should not be allowed to use medicine.

### TEETHING.

During the early months of infancy, the child should be nursed from the mother's breast. The lips, cheeks and tongue supply the suction—all that is required. But as the child grows older and more nutritious food is necessary for its support, a change takes place. The bones of the face expand and the jaws increase in length, firmness and depth, the mouth cavity enlarges, and the gums become more elevated and harder. The muscles increase in size and power. There is a tendency on the part of the child to carry everything to its mouth; evinces a desire to chew and bite everything, thereby furthering a development of the muscles and teeth. About the sixth or seventh month there begins a change,



which does not terminate until about the end of the second year. This process is called teething. It is a natural process and should not be attended with any special danger. From the infant at breast teeth are withheld, because they are not only useless, but would be an absolute hindrance to the process of nursing. When fluids alone will no longer supply the demands of the body, teeth will form to properly masticate solid foods, also for the purpose of mixing it with the juices of the mouth, so that it may be easily swallowed and digested.

**Symptoms.**—The first indications of teething will be noticed at the age of seven months. There will be heat and irritation of the mouth; the child will become restless, alternately cry and smile; the saliva will flow from the mouth, and thirst will be considerable; eyes and face will become reddened; general uneasiness, and the sleep will be disturbed; the gums become swollen, painful and ulcerated; the child bites everything it can get into its mouth. The bowels are generally loose, which will be beneficial to a limited degree. In the second stage the mouth and gums become hot, a pale bright red spot appears upon the gums, and instead of wanting to bite everything, it will fear having anything near it, and usually cries if it happens to bite anything. The child now becomes irritable and hard to please; restless, and generally desires to be taken up and immediately demands to be put down again. After the teeth are cut all of these symptoms subside, and peace and quiet once more abound throughout. As a rule the incisors are more easily cut than the eye teeth.

**Treatment.**—Free the children from any of the evils attending dentition. Here fresh air is of the highest importance. The child should spend several hours daily in the open air, and should occupy a well-ventilated room in-doors, and, if it be not overfed, will usually suffer very little during teething.

A tepid bath may be found useful in the management of the child during this period, and in relieving nervous irritability. Massage, in the form of gentle and repeated friction of the surface, has also a decided effect upon the nervous system.

**The Diet.**—The diet should be light and cooling. A drink of water occasionally will be found beneficial. In case the mother should be nursing, she should avoid all anxiety or fatigue. If there is any tendency to congestion of the brain, or convulsions,



the child should be given a bath and friction at once. If the gums be much swollen or inflamed they should be scarrified.

The first, or milk teeth, are twenty in number—the eight front teeth or incisors, eight molars or grinding teeth, and four canine or eye teeth. These begin to appear about the seventh and are completed between the twentieth and twenty-fifth months. About the age of seven or eight years the temporary teeth fall out and are replaced by the permanent teeth, thirty-two in number, four of which do not appear until after maturity, in the eighteenth or twentieth years of life, and are called wisdom teeth.

**Preservation of the Teeth.**—Every particle of food that has found lodgment in the interstices should be removed with some pliable substance. A quill or wooden toothpick, or some soft substance, will be found best for this purpose. When this has been done the mouth should be thoroughly cleansed with brush and water. If desired, a little soap may be used, or any of the dentifrice that may be bought in the stores ; or a little powdered charcoal, orris root, gum myrrh, pulverized pumice stone, diluted honey, mixed and rubbed, will make them clean and white, and at the same time prevent brittleness and the formation of tartar, and from decaying too soon.

## SECOND DENTITION.

During the second dentition the general health will not be quite up to par, although the child may look well. It will complain of being tired. The only thing necessary will be to watch the progress of the teeth, to see that they come in their proper places and in the right direction, and to see that they are not overcrowded and press upon one another, thereby endangering their regularity. The form and expression of the mouth depends largely upon the beauty and preservation of the teeth, and very much will depend upon the proper management of the teeth at this important period. Any care or expense taken at this time will be abundantly repaid by the beauty of the teeth and the mouth. The treatment should be the same as during the first dentition, plenty of fresh air and out-door exercise and a careful diet. If the appetite be poor some good tonic may be given, and the gums should be examined frequently, and if found swollen they should be lanced.



## DISEASES OF INFANCY.

The diseases of infancy and childhood are divided into—

Diseases of the mouth and throat.

Diseases of the stomach.

Diathetic diseases.

Diseases of the liver.

Diseases of spleen and blood.

Diseases of the peritoneum.

Diseases of the nervous system.

Acute infectious diseases.

Diseases not infectious.

Diseases of the heart.

Diseases of the respiratory organs.

Diseases of the skin.

Diseases of the genito-urinary organs.

The life and health of an infant depend upon its management and surrounding circumstances, as well as its being able to breathe and manufacture heat, and by being able to digest the food with which it is supplied. If its surroundings are unfavorable, and the management bad, its life and health will be feeble and doubtful.

Any violation of the laws of nature, or excess of eating or drinking, will induce indigestion, and thus endanger the life of the infant.

The mother should know the different methods of examination, so as to supply, intelligently, the physician with such information as may be useful, and thereby aid him in forming his diagnosis. The best time to make these examinations is when the child is sleeping, so that the pulse may be counted, the state of the skin, its breathing, and general posture should be noted; the color of the face, whether pale or flushed, whether the lips are pale or tinted; the skin, whether it is dry or moist; its general expression, whether natural or painful; the absence or presence of moaning, grinding of the teeth, starting, movement of the nostrils, whether working strongly or quietly. It should also be observed whether the eyes are closed or partly open or staring.



The head should be noticed, whether large, and whether the veins are full. After the child is aroused, the expression of the face should be noticed; the color and shape of the face, whether there are dark circles under the eyes; if excited or quiet, if fretful or languid. The child then should be stripped and kept near the fire. It should now be examined to see whether the skin be mottled or flabby, and if the limbs move freely; see if the joints are large, small or swollen; examine any eruptions, and the evacuations, also the penis for adhesions or paryphimosis.

**The Tongue** may be examined while the child is crying. By resting the finger on the under lip, the chin may be pressed down and the condition of the tongue noticed. A tongue with spots of curd over the surface and furred, will indicate intestinal irritation or dyspepsia.

A heavy white fur is usually indicative of fever; a yellow fur, of liver and stomach trouble; a brown fur, low typhoid condition; a strawberry tongue indicates scarlatina; a red, hot and dry tongue accompanies inflammation of the stomach and mouth; when the tongue is marked on the edges, showing the impressions of the teeth, and is pale and flabby, it will denote great debility.

**Expression of the Countenance.**—In diseases of the brain, the upper part of the face is chiefly affected, causing the forehead to contract, the brow to knit and the eyes to roll.

**The Middle Portion of the Face** is affected by heart and lung affections, the nostrils are distended and sharp, the lips are pale and uneven, yellowish in color, and dark rings below the eyes.

**The Lower Portion of the Face** is affected in abdominal troubles. The cheeks have changed in color, and will be sunken; the lips will be pale and the mouth drawn. Other signs to be noticed are redness or pallor, unequal dilatation of the pupils, squinting (ptosis) or falling of the upper eyelids. The rolling or burying of the head in the pillow, hands constantly to the head, or pulling at the head, indicates diseases of the brain.

If the legs are drawn up and the child picks at the bed clothes, the face being anxious, it will signify abdominal disease. If in diphtheria or croup and false membranes are forming, the child puts his hand in his mouth or tears at his throat; it will indicate (dyspnoea) shortness of breath.

**The Cry.**—In capillary bronchitis and pneumonia it will be



half-suffocated and labored. In croup it will be brassy metallic, with crowing inspirations; in cerebral diseases, shrill, sharp, solitary; in tubercular meningitis and marasmus, there will be moaning and wailing.

If there be earache, the crying will be obstinate and long continued.

In reflex irritation, paralysis, or convulsions, the eyes will be squinting.

In active congestion and in sleep and opium poisoning, the pupils will be small and contracted, with deep sleep and difficult breathing.

### FECAL EVACUATIONS.

The stools of a healthy infant vary in color from light to a greenish yellow, and has a consistency of mixed mustard. The odor is sour, and has an acid reaction. In the first few weeks of infancy there are three evacuations daily, and from then on to the second year there will be but two. The presence of curds in the stools denotes indigestion.

The stools in intestinal catarrh are scanty, lumpy and mixed with mucus. Clay-colored movements denote an inactive liver. In intestinal inflammation, typhoid fever, dysentery and tubercular diseases, the stools are composed of blood clots and shreds of mucous membrane.

When the stools are of a green evacuation, it is known as the Spinach stool, or diarrhœa. In a defective action of the liver, pancreas and intestinal glands, there will be found in the stools an oily matter. The presence of mucous in the stool indicates acute diarrhœa or disease of the mucous membranes.

### VOMITING.

There are three classes of vomiting—the vomiting of nursing children, the vomiting of older children and reflex vomiting.

The vomiting of a nursing infant is due to the fact that the stomach is less curved than in that of an adult. It does not denote disease, but will be found to exist in all children, and especially in those who are being nursed from an abundant breast, or overfed. It may be easily distinguished from that which denotes disease, because nothing is rejected but milk, although it may be a little curdled.

The vomiting of older children is usually due to indigestion.



If the vomiting is of a sudden and unexpected nature, it may be the beginning of some acute disease, particularly that of scarlet fever. Sometimes in girls it is the indication of beginning of ovulation, or the well-known outcome of hysterics.

Reflex vomiting is due to meningitis, chronic disease of the lungs, dentition, worms or tumor on the brain.

### OTHER THINGS TO REMEMBER.

**The Time Any Healthy Infant Will Sleep.**—A healthy infant will sleep at least eighteen out of twenty-four hours. To note when an infant first began to be sleepless, will aid in giving the commencement of an illness.

The number of respirations of a healthy child will range as follows: From two months to two years, the average is thirty-five in a minute; under one year the respirations vary from forty to fifty a minute; from the second to the twelfth year, about eighteen in a minute.

About the third or fourth month the child will begin to secrete tears and saliva.

The weight of a new-born infant is about seven pounds; sometimes it will vary from four to eleven pounds.

The average length of a new-born child is about nineteen inches and a fraction. There are extremes, from sixteen to twenty-two inches.

The chief anatomical peculiarities of a new-born infant are that their stomach is small, its intestinal actions are more rapid, the power of generating heat is small, and its heart, brain and liver are large.

The dosage for children under the adult age should be proportioned from the number of the following birthdays, divided by four, namely, for one year,  $2-24=1-12$ , for 3- $24=1-8$ , etc.

### SORE MOUTH

Is a common disease in infancy. It consists of a simple hyperæmia, accompanied by redness and swelling of the mucous membranes. It varies in extent and degree, and is limited to small circumscribed points of the membranes, or it may exist in patches, extending and involving the entire surface.

The more severe cases involve the cheeks, lips and gums as well as the mucous glands.



**Causes.**—Like most other diseases of early life, it arises from over-feeding, or improper food while teething, improper care of the child's mouth; exposure to cold and wet; bad hygiene and administration of such drugs as iodine, mercury and arnica.

Children affected with sore mouth will exhibit the following symptoms: The lips are usually red and full, the angles of the mouth are inflamed with the dripping of saliva, the mucous membrane is either punctated or patchy, or shows diffuse redness; the mouth is much swollen and tender to the touch, and the child cries as soon as the nipple is placed in the mouth; the mucous glands of the cheeks project as pearly white nodules and have the appearance of curdled milk. The child is restless, peevish and fretful; the skin is hot and the tongue is red, and covered with enlarged papillæ, or is covered with a white, frosty coat, through which the papillæ project in red points; the stomach and bowels are irritable and frequently there is diarrhœa.

Prognosis is not serious; the course of the disease will last rarely longer than a week.

**Treatment.**—The treatment consists in removing the causes. The mouth should be washed with pure water if the child be healthy; if hot and swollen, the gums should be lanced. A wash composed of listerine and water may be used every two or three hours. If there is an acid condition in the stomach, a little calcined magnesia, or teaspoonful doses of lime water may be administered, or borax, sulphur and sugar mixed and placed on the tongue will be found useful. For diarrhœa the ordinary chalk mixture from the stores, combined with a little paregoric, will answer very well. For constipation, a little tea made from rhubarb, or the aromatic syrup of rhubarb can be given.

### STOMATITIS OR SORE MOUTH OF NURSING CHILDREN.

This disease is more severe than the simple sore mouth. The symptoms are redness and soreness of the mouth.

The breath is offensive and the mouth is hot and dry, the tongue will be coated, the saliva profuse and streaked with blood. The glands of the neck are swollen, and the face oedematous; the ulcerations usually appear on the external surface of the lower gum and then spreading to the tongue and, lastly, to the cheeks. The child is much debilitated and restless.

The prognosis is generally favorable and recovery is the rule.



## ULCERATIVE STOMATITIS

Is usually seen in children between the ages of three and eight years, and never before the commencement of dentition. Unlike the simple form of stomatitis, the ulcerations are rapidly spreading ones. The mucous membrane becomes red and swollen, the gums are tender and bleed on the slightest touch, and when they come in contact with the teeth, the ulcer assumes a dirty, yellowish gray and softens and breaks down, leaving a ragged ulcer which will be slow to heal. The teeth are loosened and necrosis of the jaw bones takes place.

**Causes.**—It is caused by bad or insufficient food, cold, damp or badly ventilated houses, decaying teeth, dysentery, scrofula, eruptive fevers, or it may follow the careless administration of such drugs as mercury, phosphorus and iodine.

## NOMA (GANGRENOUS STOMATITIS OR SORE MOUTH).

**Symptoms.**—It begins with fetor of the breath, followed by free flow of saliva which is very offensive. Upon examination, a hard red shining swelling is seen upon one cheek, very tense but not painful. Inside the mouth, at a point opposite the canine teeth comes the swelling, and soon a large, ragged ulcer will appear, which will be excavated with jagged and ragged edges, from which a putrid discharge oozes. The ulcer involves the gums and cheek, causing necrosis of the bones of the jaw, and perforation of the cheeks may occur.

**Gangrenous Sore Mouth** is always secondary and follows severe maladies, such as small-pox, scarlet fever, measles, acute stomatitis and tuberculosis. It occurs between the ages of two and twelve years, and it is not contagious. Girls are more susceptible than boys.

There are few constitutional symptoms. The child rarely complains of pain. Constitutional depression sets in as the ulcer spreads, the face becomes pale, the pulse frequent, reaching 120 to 150 per minute. The mouth is held partly open, the teeth are covered with sordes, the breath is offensive and there is a flow of saliva from the mouth. The bowels are inclined to be loose, and



the appetite remains good. Perforation of the cheeks occurs between the third and tenth days. The gangrene of the afflicted side may extend as far as the nose. Looseness of the teeth and ulcerations of the periosteum of the bones may occur.

**Prognosis** is very unfavorable. Eighty per cent. die, death occurring between the third and fourteenth day. If recovery takes place, the patient is disfigured, with scars, loss of teeth and portions of the maxillary bone.

**Treatment** consists in improving the general health of the patient, pure air and ventilation, and good, nourishing and well moistened food. Early cauterization of the ulcer by sulphuric nitric, or carbolic acid to destroy bacteria and to remove all sloughs. A wash composed of chlorinated lime, carbolic acid, or permanganate of potassa and painted upon the affected part every hour or two, improves the general appearance of the ulcer; the interior of the cheek may be smeared with oil and iodoform or eucalyptus with minute doses of chlorate of potassium.

## INFANTILE CONVULSIONS.

This is a paroxysm of variable duration, attended with spasms of the glottis, unconsciousness and followed by stupor. It is caused by indigestible food, diseases of the brain, dentition, worms, rickets, acute fevers and excited play. Convulsions occurring under two years of age, are called infantile convulsions, after that it is called epilepsy.

**Symptoms.**—In infancy, the child frequently gives a violent scream before the convulsion sets in, it becomes pale, the eyes are turned upward, the lips become livid, and the face turns almost black, consciousness is partially or wholly lost. If asleep, it awakens suddenly and sometimes with a start, frequently the body becomes stiff with impeded breathing, twitching of the lips, the eyes are half closed, contractions of the feet, the hands are contracted with the thumbs bent across the palms. The spasms may occur several times in one day or there may be several weeks elapse between attacks.

**Causes.**—Breathing impure air for a length of time, overloading the stomach, presence of irritating substance in the stomach or bowels, poor quality or quantity of food, and the pres-



ence of worms, causing an irritable condition of the nervous system, during dentition from long continued pressure of the teeth upon the dental nerves, the fevers of childhood, and diseases of the brain.

**Prognosis.**—Frequent and violent convulsions should always be looked upon with much anxiety. In the early period of life, infants frequently die in convulsions. If associated with dentition or indigestion, the prognosis is not grave. When associated with scarlatina and measles, the prognosis is always grave.

**Treatment.**—First remove the exciting cause. If from impure air, the infant should be gradually exposed to outdoor air. If due to over-loading the stomach, an emetic of ipecac or the syrup of the ipecac, given in half teaspoonful doses followed by a teacupful of warm water will quickly cause emesis. If the child is teething, the condition of the gums should be examined, and if there is much inflammation or swelling, they should be lanced, allowing the offending tooth to escape. The child should be placed at once in a hot mustard bath, covering the body well up to the neck, and an ice bag applied to the head. When the child becomes conscious, a large dose of bromide of potassium should be given. For a child one year old, a dose would be 10 grains. Chloral may be employed with advantage, a dose from 3 to 5 grains by enema. To overcome the irritability of the stomach, teaspoonful doses of soda water, made by dissolving quarter teaspoonful soda in half teacup of water, repeating the dose every 5 or 10 minutes. The child should be kept perfectly quiet and in a dark room and given a light diet. When caused by nervous troubles or indigestion, the nourishment should consist of fresh milk, with about one-fourth of its bulk in lime water, given in small quantities and repeated often. See that the room is well aired. Give frequent baths until it is fully restored. If the bromides are administered, they should be continued for at least a week after the attack.

## EPILEPSY.

This is a chronic disease, characterized by convulsive attacks, attended with sudden loss of consciousness, together with convulsive movements of the muscles. The paroxysm occurs at irregular intervals and the periods between them vary from a few minutes to several months.



**Causes.**—Anything which may disturb the equilibrium of the nervous system, indigestible food, fright, injuries to the head, sunstroke, dentition, worms, heredity, loss of sleep, grief and anger, constipation, syphilis, sexual abuses, uterine disease, phimosis, masturbation, chronic malaria, diseases of the liver and kidneys.

**Symptoms.**—In some cases, there are premonitory symptoms, such as drowsiness, irritability of temper, giddiness, sometimes there is a cold wave commencing at the feet and proceeding to the head, or it may begin at the stomach, a feeling as if a ball was in the stomach which rises to the throat, causing a choking sensation, this is called the aura. When it reaches the brain, the subject becomes unconscious. The convulsion begins and the patient falls. In the severer forms, the patient suddenly loses consciousness and falls to the ground or floor, the muscles become rigid, which lasts for a moment and is followed by alternate contractions and relaxations. There is twitching of the face and limbs, foaming at the mouth, the eyes are turned upward, breathing is arrested, tongue is caught between the teeth and bitten, the countenance changes from a livid hue to a dark purple. A convulsion usually lasts from 1 to 3 minutes and is then followed by a deep inspiration, when the subject will sink into a profound sleep and continue for a half an hour or longer. On regaining consciousness, the subject usually complains of headache, is confused and stupid, pronounces their words indistinctly and if he attempts to walk, he will stagger like a drunken man. He has no remembrance of what has occurred during the attack. Occasionally the attacks occur so closely that there is no period of consciousness between them.

**The Prognosis** is about the same as in adults. Many children will improve if kept under proper treatment, while others are very obstinate. If the fits are frequent and violent, and allowed to proceed unchecked, it invariably leads to impairment of the mind, paralysis, insanity and imbecility.

**Treatment.**—Remove the cause if it can be determined. The general health, the food and hygienic surroundings should be looked into and the administration of such remedies as will relieve nervous irritability and cerebral congestion should be administered. Bromide of potassium is a remedy of great value.



## NIGHT TERROR, OR NIGHT-MARE.

Some children are affected with what is known as night-terror or nightmare. It is a nervous affection. The child awakens suddenly from a sound sleep and utters loud and terror-stricken cries.

**Causes.**—It is caused from indigestion, constipation and any great mental excitement before retiring. We usually find that children who are quick, excitable and nervous are affected with it; it is also known to run in rheumatic and choreic families.

**Symptoms.**—The child apparently well, when he retires, will in a few hours after he has been asleep, awake suddenly, uttering piercing cries, and for some minutes will not recognize his parents or nurse, and will often point to different parts of the room, showing signs of great alarm, as if in fear of some huge animal about to attack him. In a few moments it will become more composed and will soon fall asleep.

**Treatment.**—Never allow such a child to sleep alone; attend to the diet; it should be of the very plainest kind, after the noon-day meal. Bromide of potassium and chloral are the drugs to be administered, and the iodide of potassium should be given daily until the terrors cease.

## CHAFING.

Children, especially fat ones, are very often afflicted with chafing or excoriation, of the skin, usually between the thighs, behind the ears and around the neck. This is due to want of baths to keep the skin in a soft and healthy condition.

If the excoriations are excessive and persistent, it will indicate an enfeebled state of health, and is liable to cause strumous diseases of the skin. Such cases will require general treatment. The chafed part should be cleansed with the best castile soap and cold water and an application of vaseline, cream and fresh butter after the bath. A very good wash is one composed of ten grains of borax to four ounces of water; it will be found useful when applied once or twice a day. Also an ointment made of oxide of zinc, one drachm, cosmoline, one ounce, mixed thoroughly and used after washing.



## YOUTHFUL URINARY TROUBLES.

Nocturnal incontinence of urine, or enuresis, is an involuntary expulsion of urine occurring during sleep.

It is caused from renal diseases, worms, constipation, rheumatism and an adherent prepuce, and sometimes from the excessive use of liquids or from lying on the back while sleeping; also from masturbation. The discharge is at first involuntary, due to feeble condition of the organs; the quantity is small because of the smallness of the bladder, but as they develop the infant will be made to know, in his wakeful moments, of the discharge of water from the kidneys and will communicate the matter, in his way, to the nurse or mother. But it sometimes happens that the muscles of the bladder will relax and its contents will escape, unknown to the child. This condition is usually with the very young, yet it often continues until the child is several years old, and will be a great annoyance to both the child and its mother. The establishment of the habit of taking the child out of bed, to evacuate the bladder, will greatly aid in the accomplishment of the desired end, but in case this fails a physician should be consulted.

**Treatment.**—Much attention should be given to the diet and general health of the child and the amount of liquid given should be restricted, and not given after four or five o'clock in the afternoon for some time after the child is well. It should be taken up to urinate late at night and early in the morning, and if necessary, during the night, but should always be thoroughly awakened.

The child must be allowed very little meat if any at all, and should be kept in the fresh air as much as possible. Plenty of exercise should be given regularly, and they should wear flannel next to the skin. A cool bath should be given each morning with a tablespoonful of salt added. For the phimosis, the operation of circumcision will give relief and the adherent prepuce will be broken up and the parts kept well greased with carbolized oil until healed.

**The Drugs** to be used is belladonna in the form of tincture, beginning with small doses, and gradually increasing, until the pupil is dilated, or its active principle atropina. When this remedy is administered it should be by a physician, as they are to



dangerous to be given by persons not familiar with such drugs. *Rhus aromatica*, fluid extract, beginning with a drop or two each day and gradually increasing, is an eclectic remedy of much value or saw palmetto used in the same way. The above may be given in a little sweetened water or aromatic elixir. Bromide of potassa and chloral have been of benefit in some cases; for a child one year one grain and an additional grain for each year of the age given at bed-time is the dose. The fluid extract of ergot has been used with success. But occasionally all remedies fail to give relief.

### NOSE BLEED.

Nose bleeding is frequently a disease of childhood and is not alarming unless accompanied by some other disease. It comes from an injury of the mucous lining of the nose and will cease in a few minutes without any interference, but in case it does not, a very good remedy will be to apply cold water to the nape of the neck and back. This will soon stop the discharge. Another very simple remedy attended with good results, is to roll a piece of paper or muslin and place it above the front teeth, under the upper lip and pressing upon this, the passage of blood through the vessels leading to the nose will be obstructed and the blood will no longer flow. Occasionally washing the nostrils with witch hazel, a watery distilled extract, or the fluid extract of ergot administered internally in teaspoonful doses is very effective in nose bleed as in other hemorrhages.

### CONSTIPATION.

The health of the infant depends very largely upon the regularity of its bowels. There should be proper, free and full discharge from the bowels every day. But the habit of taking medicines to act upon the bowels is a most pernicious one. Such treatment only aggravates and irritates the lining membranes of the intestines; and any excessive evacuation of the watery portions of the bowels leaves the secretory glands in a dry condition, causing an aggravation of costiveness.

In the treatment, prevention is better than cure. Form the habit of making daily efforts to move the bowels. Set the child upon the stool at some regular time each day; manipulate and rub the abdominal muscles with a little oil, pressing the fingers deeply into the bowels, gently kneading; an administration of tepid



water by an enema from time to time, until the normal evacuations be established ; very warm or hot water may be drunk freely in the morning. It may be sweetened with a little sugar. The child should have more exercise in the open air and if the mother be nursing, she should also drink a glass of water on rising each morning and use such food as will excite the mucus secretions of the large intestines. Coarsely cracked boiled wheat, graham bread, mush, cakes and gems and all articles of diet made from unbolted wheat flour should be tried. The mother should take her meals at stated hours and use plenty of ripe fruits, such as grapes, prunes, figs, pears and apples. If these simple hygienic methods are followed, she will have no trouble in effecting a cure of the most obstinate constipation of the child as well as herself.

### EARACHE—OTALGIA.

Earache is a neuralgic or inflammatory disease of frequent occurrence among young children.

**Causes.**—Inflammation of any portion of the auditory canal, derangement of the digestive apparatus, and exposures to cold, are the most prominent causes. After having once occurred it will be apt to return.

**The Treatment** consists in removing the cause as much as possible. If it is a result of cold such means should be adopted as will abort it. A bath of high temperature can be used, allowing the child to remain until there is free action from the skin, then remove and thoroughly rub the skin with a good linen towel until there is a red glow upon the surface ; or the ear may be steamed by placing the child so that the steam from a kettle will pass into the ear, or tobacco smoke may be blown into the ear. A little tuft of cotton, saturated with two or three drops of laudanum, can be placed in the ear and let remain. A five or ten per cent. solution of cocaine hydrochlorate, applied with cotton and left remain, rarely fails to give relief.

### COLDS.

Exposure to drafts of air or colds result in a closure of the pores of the skin, thus throwing an extra amount of work upon the other excretory organs. The liver, kidneys and lungs from this increased amount of work soon become congested, and thus



we have a condition known as common cold. It is characterized by sneezing, coughs, chills, weariness and a stopping up of the nasal passages. A cold is usually looked upon as a very small matter and scarcely ever receives proper attention until there is seen the danger of it terminating into something more serious. This condition should receive prompt attention. A cold closes up the pores of the skin and there is great danger of congestion, as the natural means of the escape of all the poisons that are eliminated by the skin is prevented, and if not removed they must be absorbed, and this is dangerous, hence there is necessity of prompt attention.

To treat a common cold an early bath of sufficiently high temperature will prove effectual in producing the desired end; it will produce a free action of the skin. This may be aided and stimulated by rubbing the skin with a rough towel. The patient may then be allowed to sweat for two or three hours, after which he should be protected by warm blankets for several hours until the reaction of the system has been produced. The food should be light and easily digested. Excessive eating will be found detrimental to the patient during a severe cold as well as in other diseases. Plenty of fresh air will be of great benefit through the treatment. The bowels should be kept open and the kidneys acting. The following will be very useful :

Syrup ipecacuanha, drachms 2.

Spirit nitrous ether, 1 drachm.

Simple syrup, 2 drachms.

One teaspoonful to a child of six months.

In case there is much fever, aconite, two drops, into an ounce of water ; of this give a teaspoonful every three or four hours.

## CROUP, OR SPASMODIC LARYNGITIS.

This is an acute, spasmodic inflammation of the glottis, larynx, trachea or wind-pipe, occurring in children from the age of six months to those of ten years. Croup is of two varieties.

**Spasmodic Laryngitis**, or false croup, is distinguished from membranous laryngitis in having no false membrane. In true membranous laryngitis the inflammation of the mucous membrane is attended with exudation of a false membrane.

Spasmodic laryngitis occurs most frequently during first den-



tition, being very common in the second year of life, but is often met with a year or two later. Enlarged tonsils and atmospheric changes are the most frequent causes. It is hereditary in some families, and more frequent in boys than in girls.

Spasmodic laryngitis commences mostly in the night, between ten and twelve o'clock after the first sleep. The child goes to bed with a slight cold, probably feverish, with a little hoarseness. Sleep is usually quiet and natural, but the child awakens with a loud, barking cough; there is great shortness of breath; in breathing there is a harsh, whistling noise; the face is flushed, and wears an expression of suffering; the child cries and moves from one position to another; the voice is hoarse, or even whispering. Usually from half an hour to two or three, these symptoms abate; the patient becomes exhausted and falls asleep. Often there is no return of spasmodic affections, but sometimes the attack is repeated the following night. The termination is not always favorable. Frequently spasmodic laryngitis is the precursor of other affections, which terminate fatally.

**Acute Membranous Laryngitis** is preceded by a cold; the child coughs and sneezes and is hoarse; there is diminished appetite, and fever and a great deal of thirst. A hoarseness and a peculiar cough distinguishes true from false croup. It is a hoarse, dry, harsh or suppressed cough, and continues throughout. Hoarseness of the voice is also a constant symptom. Toward the close of life the voice is usually lost, and the child expresses thoughts in an indistinct whisper. The child is restless and feverish, and the disease makes rapid strides; finally the cough ceases to be loud and barking, and is very much suppressed; the child is in perpetual motion; face is pale, and the head thrown back and the nostrils dilated. In most cases there is a temporary improvement in the shortness of breath, but the characteristic cough remains. There is more or less delirium, and great exhaustion. Convulsions frequently occur in the last stages and death relieves the little sufferer. Sudden death occurs during a paroxysm of dyspnoea. Death is often due to the false membrane preventing the passage of air to the lungs. Fatal cases may terminate in two or three days, but the ordinary duration is from five to fourteen days.

**Treatment.**—The child must be put in a well-warmed room, and the atmosphere kept moist by a kettle of water, which should



be kept boiling. Emetics are of great importance in every stage of the disease, and should be given as soon as the disease is recognized. Every family should keep on hand a quantity of the syrup of ipecac, or lobelia, and, soon as the child begins to show symptoms of the disease, he should receive a full dose every five or ten minutes until free vomiting is excited. Increase the quantity boldly; the life of the child depends largely upon its being able to vomit. No danger will result from an excess of these remedies. Powdered alum in teaspoonful doses, mixed with syrup or honey, will sometimes answer the same purpose. If there is much fever, and the patient is seen early, half-drop doses of the tincture of aconite, given every fifteen minutes until four doses have been taken, generally reduces the fever. To support the general system, quinine and bromide of ammonium will be found useful, when administered alternately every three hours. To prevent the false membrane from occurring, mercury is probably one of the most reliable drugs, and used by all schools of medicine.

The following formula may be put up, labeled and kept in the house for use on these occasions:

Calomel, 2 grains.

Bicarbonate of soda, 24 grains.

Pulverized ipecac, 1 grain.

Pulverized pepsin, 24 grains.

Divided into twelve powders, one powder to be given every two hours.

The following spray is recommended by Morrell Mackenzie:

Lactic acid, 3½ drachms.

Distilled water, 10 ounces.

Apply frequently with a spray or a mop.

The child's strength must be maintained by full doses of alcoholic stimulants—milk and animal broths. Inhalations of vapor of slacked lime is also useful in preventing the formation of membrane. Hot fomentations to the throat in the form of hot cloths; onion poultices are very good.

## DIPHTHERIA.

Diphtheria is an acute, highly infectious disease, with local manifestations caused by a specific poison attacking children and adults. It is most violent in bad hygienic locations.

The period of incubation varies from one to four days, occa-



sionally two weeks. The patient suffers with headache, feverishness, loss of appetite, chilliness ; sometimes vomiting.

The invasion is gradual—chilliness and vomiting or nausea, diarrhœa, occasionally constipation, stomach pains, stiffness of the leaders of the neck ; the throat is dry and painfully hot and tender, with stinging or prickling sensation on swallowing and tenderness at the angles of the jaw. The tongue is coated with a white or yellowish-white fur. As the disease progresses the temperature reaches 103 to 107 degrees. The pulse is weak, compressible and may be irregular, according to the severity of the disease. The patient feels weak, sick and depressed. Urine is albuminous. Diarrhœa may continue, or, if constipated, the bowels move only by physic. The heart is weakened, and symptoms of a low and depressed condition may exist. The local symptoms are confined to the throat, which is inflamed, swollen and covered with a yellowish-white membrane, gray-brownish or black in color. It may exist and form a large patch ; the thickness varies, and it may be soft or tough. When removed it leaves a bleeding surface, on which a fresh deposit forms. The membrane may extend over the throat-nose, through the Eustachian tube to the middle ear, causing destruction of the hearing or a discharging ear, or it may extend down the bronchia or trachea. Inflammation of the glands of the neck, causing swelling of the neck, is a common symptom of the disease. If the disease extends into the nose there will be a thin discharge from the nose which will excoriate the lip. If it forms in the larynx or wind-pipe, there will be a closing of the passage, causing difficult breathing and blueness of the surface from suffocation. In the mild form of the disease the temperature will be low ; no albumen in the urine, and no sequella.

**In the Inflammatory Variety** there will be a high temperature and weak pulse ; the throat will be extensively involved, and may ulcerate or slough ; albumen in the urine ; the neck swollen and an extensive membrane in the throat.

**Insideac Variety** the symptoms are mild at first, then suddenly become severe, involving the larynx.

**In Lachrymal Variety** the membrane forms in the larynx, but may extend into the adjoining parts.

**In Nasal Variety** the membrane first forms in the nose. There will be a thin, sanious, fetid discharge, which escapes and



runs down on the upper lip, ulcerating and inflaming it, and causing swelling. The membrane may extend through the nose, in the pharynx and larynx bleeding at the nose may occur.

**In the Asthenic Variety** the symptoms are from the start of a low character ; extreme prostration. The temperature 98 to 100; the pulse weak and small and irregular, compressible ; the heart is weak; the tongue coated brown; delirium, and offensive breath ; the membrane is soft and may not be extensive.

**The Treatment** consists in strict quarantine ; plenty of good food and fresh air. The best remedies are sulphur sprayed or blown into the throat ; also the administration of tincture of chloride of iron, in five or ten-drop doses, in a third of a glass of water, repeated every four hours ; burning sulphur in the room. Sulphur is the simplest, safest and best remedy. There is no danger from it, and it will cure more cases than any other treatment. As soon as the first symptoms of sore throat are noticed, give a teaspoonful of sulphur, and, if it is not well in a few hours, repeat the dose, and there will be no cases in your family. If it does it occur, the disease will be mild. Never allow a physician to spray or swab the throat with strong solutions or acids, as they can do no good and always do harm. During convalescence a good tonic is necessary.

There is a remedy called toxine, which is claimed to cure this disease. But if the above treatment is begun upon the appearance of sore throat, you will have no use for any other treatment.

## WHOOPING COUGH.

This is an acute infectious disease characterized by a peculiar paroxysmal cough, having a loud crowing or whooping sound. The period of incubation varies from a few days to two weeks and has no symptoms. The catarrhal stage lasts from nine to fifteen days, and beginning with fever, which is slight and continual throughout this stage, the cough is frequent and dry. The spasmodic stage lasts from two to four weeks. The cough is the most prominent symptom. It is the peculiar whooping variety that gives the name to the disease. The cough consists of a number of quick, forcible expirations, alternating with prolonged, shrill crowing, inspiratory whoops. These begin suddenly. During the attack the body is bent, the eyes protrude, the face becomes red, sometimes blue ; the cough may get weaker, so as to be scarcely heard,



and ends by the expulsion of a thick, tenacious mucous. In some cases vomiting occurs. Sometimes there will be hemorrhages, involuntary evacuation of the bladder and bowels, prolapsus of the anus, rupture or convulsions. Between the paroxysms there will be exhaustion, headache, loss of sleep and fever.

**The Treatment** consists of keeping the patient warmly clothed, in a warm room, and an occasional dose of physic in some form. The ordinary senna tea, salts or rhubarb tea are first class; keep the kidneys acting freely, by using ten or fifteen drops spirits of nitre. Give this for three or four hours—all that will be required during the first stage. During the second stage, such sedatives as tincture of lobelia, tincture of ipecac, or syrup of ipecac combined with opium or paregoric, to relieve the spasms. Any of the cough medicines will answer this purpose very well. Keep the patients in good, pure air, and during this stage they can be allowed to play out of doors. Give good, nutritious diet—milk, puddings, etc. During convalescence some kind of tonic treatment can be used to advantage.

### SORE EYES, OR OPHTHALMIA.

Sore eyes, occurring generally in infancy, are of two varieties—simple or catarrhal and the blennorrhœal, or ophthalmia neonatorum. The catarrhal form is caused by exposure to bright light, cold, introduction of foreign substances under the lids, dust and irritating gases. The blennorrhœal variety is caused by the introduction of infective matter under the lids during birth, or subsequently by careless handling.

**Symptoms.**—The catarrhal form is of mild character, with a slight discharge of purulent matter, with a little swelling and increase of heat in the lids, slight intolerance to light, and some granulations may appear upon the surface. It may disappear in a few days or may be protracted.

**The Blennorrhœal Form** begins soon after birth, usually by third or fourth day, but may not occur until the second or third the week. The light affects the eyes, causing them to be painful. The child will be fretful and sleep but little; the eyes will be normal in appearance. The disease progresses rapidly; in twenty-four to thirty-six hours there is considerable swelling in the upper lids, soon extending to the lower lids, when it will be impossi-



ble to separate them. The conjunctiva becomes thickened, swollen and deep red; fine granulations appear upon it; there is an abundance of secretion of pus, with streaks of blood, which oozes out when the lids are separated. At this stage the cornea loses its polish, and spots appear upon it, and perforation now occurs, the aqueous humor escapes, and the iris falls forward closing the apperture, preventing a further loss of the liquids. Occasionally the cornea instead of sloughing becomes infiltrated, to a greater or less extent, ulcerating without perforation. As the patient recovers, cicatrization occurs. Swelling, heat and redness of the lids and the granulations gradually disappear, and recovery is complete, except so far as the cornea has been injured, leaving a white opaque scar, called nebula.

Ophthalmia of the new-born is highly contagious. It commences on one side, and within a few days, extends to the other, unless proper precautions have been taken.

**Treatment.**—Catarrhal ophthalmia requires very simple treatment. Bathing the lids with luke-warm water, cold tea, or a solution of laudanum, ten drops, and sulphate of zinc, one grain, to two ounces of water, and bathing the lids every three or four hours with this, and allowing one or two drops to find their way under the lids is all that is necessary to cure.

Blennorrhœal ophthalmia requires prompt and judicious management. There is scarcely a disease in which delay is more disastrous. As soon as an inflammation occurs, the opposite eye should be covered with a compress, held in place by adhesive plaster. This can be removed so that the eye can be examined once or twice daily, and the bandage re-applied; frequent removing of pus is very important. The lids should be pressed apart every hour, and warm water should be thrown under the lids with a small glass syringe to remove any pus.

**Medicinal Applications.**—After the pus has been removed, the following formula has ordinarily been favorable:

Corrosive sublimate, 1 grain.

Rosewater, 2 ounces.

Distilled water, 4 ounces.

Morphine, 2 grains.

Applied with a medicine dropper between the lids, 3 or 4 drops at a time.



Two or three thicknesses of linen squeezed out of ice water in which a teaspoonful of powdered boracic acid had been previously dissolved and changed every two or three minutes, aids materially in subduing inflammation and preventing contagion. As long as the cornea retains its transparency and polish, the eye is safe; the decline of inflammation is gradual, generally rapid, yet several weeks may elapse before the full restoration of the normal state. In the declining stages, an eye water composed of one-fourth grain of nitrate of silver and one and a half grains of morphine to an ounce of water will expedite the cure. For the granulations, if there is any remaining, the solution of nitrate of silver, five grains to an ounce of water, the lid having been everted, this solution can be applied with a camel's-hair brush, immediately washing away with a solution of salt and water. The first indication of treatment is thorough cleanliness. The eyes may be washed out with tepid water and salt, a drachm to a pint, every two or three hours, according to the amount of discharge.

## WORMS.

There are four varieties of worms that infest the alimentary canal of children. The oxyurus vermicularis, or thread worm, is four or five lines to half an inch in length. It is white, slender and elastic, blunt at the ends and with a rounded mouth; it is common in the large intestines and especially in the rectum of children. The ascaris lumbricoides resembles the common garden worm. The females measure ten to twelve inches, males, four to six inches; the eggs are oval in shape, about a thirty-fourth of an inch in length, having a nogulated shell; they occupy the small intestines principally, and are sometimes found in great numbers, occasionally accumulated in the form of a ball, and often find their way into the stomach and they may be discharged through the mouth and nostrils.

The *Taenia Solium*, or the Common Tape-Worm is white and flat, the head extremity being long and slender with a narrow neck and a minute head. The head measures about one-fourth of an inch, and is armed with two circles or hooks, and is also provided with from two to four suckers; the joints are flat, averaging from one-eighth to half inch; each segment is provided with a set of generative organs, and contains ova for the production of thousands of individuals. The ova measures one-seven-



teen hundredths of an inch in diameter. The tape worm is supposed to contain about five million ovas.

**The Taenia Mediocanellata** is the stronger variety of tape worm and will measure from ten to forty feet in length ; it differs from the taenia solium in the neck being thicker and shorter, stronger and thicker segments, four strong suckers, but no hooks ; the head is oval in shape and measures about one-tenth of an inch.

**Symptoms.**—In thread worms there is frequent desire to go to stool, intense itching about the anus. In females their presence in the folds of the rectum and vagina produces an intense itching most marked in the early evening, when the child is warm in bed. It sometime causes onanism in girls as well as boys. Symptoms of ascaris lubricoides or long worms, are frequently obscure ; the child will have an irregular appetite, an enlargement of the abdomen, colicky pains, pallor of the face, itching of the nose, offensive breath, disturbed sleep, grinding of the teeth, often convulsions and other nervous affections. The tape worm frequently produce no symptoms ; occasionally the child will complain of colicky pains, itching of the nose and anus, dizziness and ringing in the ears ; an increased flow of saliva, ravenous appetite, indigestion, with sharp abdominal pains, and emaciation. The only positive symptoms of their presence is the passage of them in the stool.

**Treatment of Thread or Seat Worm.**—The lower bowels should first be cleaned by an enema of warm water and soap, immediately followed by an injection of one pint of an infusion of quassa and the sulphate of iron, one ounce, one-third injected on alternate mornings. Alum and water, one drachm of alum to a pint of water ; lime water and simple salt and water may also be employed. While the injections are being used the following powder may be administered with good result.

Santoninum, 2 grains.

Calomel, 3 grains.

Pulverized aromatics, 4 grains.

Divide them into four powders, give one at bed time, followed by a dose of oil in the morning or the following :

A resin of jalap, 2 grains.

Pulverized scammonii, 5 grains.

Calomel, 1 grain.

Taken at bed time for a child of six years.



For the round worm *santoninum* is considered the best remedy. It may be given the same as recommended for seat worms. The dose should be from one-quarter to one grain, three times a day. After it has been given for one or two days it must be followed by purgatives *cascara sagrada*, or one grain of *jalapae* resin in milk. The fluid extract of *spigelia* (pink root) and *senna* is convenient and useful. These will not be required to follow with a purgative. The following formulae have been used with success :

Oil of worm seed, one and a half drachms.

Oil of peppermint, 6 drops.

Castor oil, 5 drachms.

Syrup of *acaciae*, 5 ounces.

Teaspoonful three times a day to a child three years old.

Oil of worm seed, 1 drachm.

Castor oil, 3 ounces.

Oil of turpentine, 2 drachms.

Teaspoonful twice a day.

**Treatment of Tape Worm.**—The oil of male fern is one of the best remedies for children, administered in half teaspoonful doses. It may be given to a child six years old. The following is a very useful remedy :

Oil of male fern, 3 drachms.

Oil of worm seed, 1 drachm.

Oil of turpentine, 2 drachms.

Castor oil, enough to make two ounces.

Give one teaspoonful twice a day.

A decoction of pomegranate root bark may be found useful, given in doses from one to two teaspoonfuls, or pumpkin seed tea is a domestic remedy. Powdered *camellia* may be used, given in a little syrup, or the tincture may be used as in the following formula :

Tincture *camellia*, one-half drachm.

Syrup of ginger, 1 drachm.

Syrup of *acasia*, one-half drachm.

Given at bed time, followed by a purge in the morning.

Tanret's pelletirine is a most valuable remedy ; it is dispensed in bottles containing a proper dose for an adult. In children, from nine to twelve years old, half an adult dose is given. Before using these remedies a purgative should be used two or three days ; also use a light and liquid diet.



### FOREIGN BODIES IN THE EAR.

Children will put all sorts of things into their ears. Peas, beans, sticks, buttons, pebbles and small stones are frequently found, also insects will creep and fly into the external auditory canal. Whenever a foreign body is present in the ear there is more or less pain, inflammation, tumefaction and otorrhœa. By taking hold of the external ear with the thumb and finger, and by pulling outward and backward, the object can generally be seen and removed with a small pair of forceps. When insects get into the ear their movements cause intense pain. This can be stopped by pouring a little kerosene or sweet oil into the ear. All foreign bodies can be easily removed by using a syringe and hot water. The water can be injected with considerable force, and generally gives instant relief. But should the water fail to remove it, seize the object with a small pair of tweezers or forceps and gently withdraw, following this operation with a solution of laudanum and boric acid.

### PAROTITIS OR MUMPS.

This is an acute, specific infectious disease, characterized by inflammation and swelling of the parotid glands with a tendency to cause inflammation of the testicle in the male and of the ovary in the female, due to a peculiar virus of unknown origin which is highly contagious, propagated by contact.

**The Symptoms,** during the period of incubation which varies from five to twenty days, are, slight indisposition with fever and headache. The disease advances and there is slight swelling of the glands about the ear, also down the neck the skin inflames and sometimes a slight desquamation may occur. Motion intensifies the pain, the swelling causes an impairment of the speech and hearing, saliva flows from the mouth in bad cases and occasionally there will be convulsions. The swelling will last from three to nine days; during convalescence there will be free perspiration, abscesses may form and the neighboring lymphatic glands may enlarge. If the patient takes cold the inflammation becomes milder in the parotid glands but goes to the testicle in the male or the ovary or uterus in the female. Should this occur it often leaves permanent inflammation or disease of these organs, sometimes causing a loss of their usefulness. The treatment is hy-



gienic and dietetics: mostly rest and quiet, keeping the bowels and kidneys open and treat such symptoms as may be threatening. Hot and cold cloths to the salivary glands give relief. If the temperature is high give the aconite fever mixture.

### MEASLES OR MORBELLI.

Measles is a self-limited eruptive fever highly contagious and attended by catarrh of the mucous membrane of the air passages.

Measles are carried by infection by direct contact with the patient or being in the sick room. The contagion is most marked during the prodromal period, diminishes during the eruption and becomes extant during desquamation.

The period of incubation may vary from six to thirteen days, the period of invasion from three to five days and the period of desquamation from four to seven.

The symptoms according to stages are: period of incubation, scarcely no symptoms; during the stage of invasion, there is lassitude, headache, backache, muscular soreness, chilliness with rigors or convulsions and slight fever ranging from  $101^{\circ}$  to  $102^{\circ}$  Fahrenheit. There is restlessness and slight nocturnal delirium, nasal catarrh with sneezing, occasional nose bleeding, seeing things double, or light hurts the eyes, the eyelids and throat are inflamed and sore, hoarseness with a dry cough, rapid respiration; there may be vomiting, diarrhoea or constipation.

Eruptive stage: the eruption seems to come about the fourth day, first upon the hard palate, then at the roots of the hair, then upon the forehead, soon spreading over the trunk and the extremities, being most marked upon the back of the hands. The rash begins as small scattered red points slightly elevated. The color varies from dark to light red and fades upon pressure but quickly returns, when the pressure is removed, vesicles and pustules sometimes form. When the rash fades, a coppery discoloration remains at the place where the rash first begun to form, it begins to fade in about thirty-six hours, the temperature rises until the rash reaches its highest, when it has remissions in the mornings after the fourth day. It rapidly declines after the tenth day, it falls below normal. There will remain the puffiness of the face and hands and the skin may be irritable and the catarrh of the Eustachian tube frequently causes deafness, the tongue will be coated but moist, the bronchial catarrh and vomiting may persist



until the last. There is a mouse odor of the urine, breath and sweat.

The desquamation stage has scarcely any symptoms. The desquamation is like fine bran or small scales and has the odor of meal.

The rare forms of measles are the morbelli sine eruptions. It has the fever catarrh and other measles symptoms, but lacks rash. Morbelli sine catarrh has no catarrh, scarcely no fever. The characteristic rash being the only symptoms.

The malignant form may begin mild or severe, but it soon assumes a typhoid character with great prostration and cold extremities, brown and dry tongue, delirium, picking at the bed clothes with low mutterings and stupor, the pulse is weak and rapid, irregular, the eruption is livid purple and black. There may be hemorrhages from the mucous surface, bronchitis, congestion of the lungs or pneumonia may develop. Measles often leave the patient with sore eyes, running ears, sore throat, bronchitis, acute or chronic consumption, dysentery, acute Bright's disease and gangrene of the genital organs.

**The Treatment** of measles consists in strict quarantine and the best hygienic surroundings, a darkened room, avoiding draughts on the bed, and rest, and a liquid diet. For constipation use saline cathartics, for the cough use the liquor ammonia acetate or wine of ipecac or the tincture of camphor compound. The fever is best controlled by the liquor ammonia acetate or tincture of aconite. Where the fever is very severe or the temperature very high, sponge the surface of the body and limbs with tepid water, or use quinine or coal tar preparations, such as anti-febrine, antipyrine, etc. The restlessness is best controlled by an opiate, the Dover's powders being one of the very best. When constriction of the chest occurs, poultices will give relief quicker than anything else. Quench the thirst with acid drinks, lemonade or buttermilk, or ice and ice water. For the itching use tepid sponging or smear the surface with some oily substance. When the eruption goes in, use a hot bath, with a little mustard added, also hot drinks will soon restore it. When there is hemorrhage use quinine or mineral acids diluted with water. Turpentine rubbed on in the form of turpentine and lard in this condition is very useful. When the patient convalesces, give quinine, iron, cod liver oil, salt water baths, or a good tonic treatment, taking care to guard against cold by wearing flannel next the skin.



## RUEBOLA OR GERMAN MEASLES.

This is a contagious eruptive disease of mild character, attended with slight fever. It is contagious by contact during the entire course. It is epidemic in character. Persons between the ages of two and sixteen years are susceptible.

The stage of invasion lasts about twenty-four hours and there are often no symptoms except slight fever. But in other epidemics, there will be sore throat, watering of the eyes, nausea and headache, the temperature reaching  $100^{\circ}$  to  $103^{\circ}$ .

The stage of eruption lasts about three days. It begins upon the roof of the mouth, spreads to the face and upper part of the chest and then over the trunk, arms and limbs. Within twenty-four hours, the entire surface of the body except the hands, scalp and soles of the feet are covered.

The eruption consists of slight papules varying in size from the point of a pin to a pea. They are of irregular shape but usually circular with intervening healthy skin, the color varies from brown to pale rose. After the first or second day, the eruption ceases to spread. It is attended with slight burning and itching of the skin.

The stage of desquamation lasts two or three days and is very slight. Slight pigmentation may remain for a few days. The treatment consists in diet and hygiene only, as there is no very serious results to be expected from an attack.

## SCARLET FEVER.

## SCARLATINA—SCARLET RASH.

Scarlet fever is an acute, self-limited, contagious disease. Its chief lesions are in the skin and mucous surfaces, and characterized by the red rash, fever, sore throat and followed by the discoloration of the skin and nails.

**Causes.**—Scarlet fever is always caused by infection, either by direct contact or directly through the atmosphere; clothing food or drink. Anything which will lower the vitality will be predisposed to cause the disease. The greatest danger of infection is during the stage of desquamation. There are five varieties of the scarlet fever: Scarlatina, simplex mitris; benign, anginosa, maligna, scarlatina skin eruptions and latent scarlatina.



Scarlatina simplex is the most common form. It is divided into four stages: Stage of incubation, invasion, eruption and desquamation. The average length of each stage in incubation is three to seven days, sometimes delayed until the fourteenth day. The stage of invasion lasts one or two days, often lasting but twenty-four hours. The stage of eruption is from seven to fourteen days. The disease averages about three to five weeks.

**The Symptoms** are: Chilliness followed by fever, reaching to  $104^{\circ}$  Fahrenheit or higher. The skin is hot and dry, the pulse frequent and the face flushed. The fauces are red and dry, the throat is sore. There is prostration with nausea and vomiting, thirst and bleeding at the nose; sometimes the tongue is coated red at the tips and edges, and the papilla enlarged, giving the appearance of strawberries. There are muscular pains, severe frontal headache, restlessness and hurried respirations, slight delirium at night, convulsions and coma occur in very young children and there is a change in the blood globules.

The eruption is of great importance in forming a diagnosis. It begins as minute bright red spots, the size of a pin head, separated by a healthy skin. These gradually spread until the entire surface becomes a bright red. The eruption varies in color, sometimes being mottled. During the first forty-eight hours, the color will disappear on pressure, but will return as soon as the pressure is removed. With the eruption there appears a most intense itching and burning of the skin. On the fourth day the eruption becomes complete, and at its highest, which is about the fifth day, it begins to fade and by the ninth day has disappeared entirely. When the eruption first appears it can be seen in the roof of the mouth some time before it appears on the neck and upper part of the chest and spreads rapidly over the face, then over the rest of the body. It is most marked in flexions of the joints.

**Symptoms During the Stage of Eruption.**—At first, slight convulsions, great thirst, constipation, headache, restlessness at night and delirium appears. The eruption appears with a dry, rough itching and burning of the skin; the eyelids, hands and feet sometimes appear puffy. The tongue is coated and has the appearance of a strawberry. The temperature rises to  $104$  and  $109^{\circ}$  Fahrenheit, which declines as the rash fades. The throat is dry and inflamed, sometimes suppuration of the tonsils occur;



swallowing is difficult on account of the enlargement of the sublingual, submaxillary glands and tonsils. The urine is high-colored and contains albumen.

**The Symptoms during the Stage of Desquamation.**—In this stage the other symptoms rapidly subside. The pulse and temperature sometimes fall below normal. The epidermic layer of the skin peels off in small scales or large pieces; sometimes there will be shedding of the entire coats of the hand. Accompanying the shedding of the skin is intense itching; the urine increases in quantity, the albumen and tube casts disappear from the urine, and the soreness of the throat disappears.

**In the Anginosa Variety,** the symptoms are greatly aggravated; there may appear diphtheritic patches in the throat, and inflammation of the larynx may be followed by gangrene. All the glands around the neck may swell and suppurate; the breath is offensive, swallowing is extremely difficult and painful. The rash is delayed and is not well marked and there are symptoms of uræmic poisoning: nausea, vomiting and diarrhœa is common, the temperature remains high after the rash has disappeared.

**The Symptoms of the Malignant Variety** are great prostration, restlessness, delirium, coma, and convulsions with picking at the bed-clothing. The pulse is feeble, irregular and rapid. The circulation is impeded, the respiration rapid, the skin is hot and cold alternately, or a cold and clammy sweat. The tongue is dry and brown, and death may occur in a few hours before the rash appears.

**In Scarlatina Skin Eruptions** there is sore throat and fever, but no eruptions. This form occurs in second attacks.

**In Latent Scarlatina** there is absence of all symptoms except the desquamation, dropsy, and albuminuria. The sequella of scarlet fever is inflammation of the throat, running ear, dropsy, paralysis of the face, and uræmic poisoning.

**The Treatment** of scarlatina consists in quarantine separation from other members of the family liable to contract the disease. Strict hygiene should be maintained, and the food should consist of easily digested and nourishing material, such as beef tea and milk, cooling and acidulated drinks, such as lemonade. Sponging the skin with water or a solution of carbolic acid or camphor; the



old-fashioned goose grease is of great importance here in relieving the itching and is enhanced by adding a little carbolic acid to the mixture. For the bowels, saline mixtures, Epsom or glauber salts are the best. Cream of tartar lemonade is good. A few drops of the tincture of belladonna to a third of a glass of water and given in teaspoonful doses every fifteen or twenty minutes will hasten the appearance of the eruption. When there is great soreness of the throat, allow them to suckle small bits of ice or to inhale steam and the use of hot or cold moist appliances externally around the neck is very useful.

The medicines commonly used consist of the administration of tincture of muriate of iron in five or ten drop doses, in a little hot water. Aconite to reduce the fever, and when there are kidney complications, dry cups to the loins, followed by poultices, diuretics, such as digitalis in one or two drop doses, every three or four hours, or pilocarpine and hydrogen cathartics, such as cream of tartar, etc. When there is delirium, bromides, chloral, quinine or morphine in the proper doses according to the age of the patient. In the extremely malignant cases no treatment is necessary but stimulants, which should be commenced from the start, hot baths, carbonate of ammonia; whiskey is the best when added to frequent injections of milk.

## VARICELLA OR CHICKEN POX.

Varicella is an acute infectious fever characterized by a vesicular eruption caused by a specific virus, which is highly contagious. It attacks children mostly before the fifth and rarely occurs after the tenth year.

**The Period of Incubation** lasts about nine or ten days, and is attended by no symptoms.

**The Stage of Invasion** lasts about twenty-four hours, with slight chilliness and followed by slight fever, which rarely reaches above 101 degrees Fahrenheit.

**The Stage of Eruption** lasts but a few hours, and begins within the first twenty-four hours after the first symptoms. The eruption commences as small, puffy patches, quickly followed by transparent vesicles, varying in size from a pin head to a split pea. They collapse when pricked with a pin, and leave no swelling or elevation of the skin. The eruption makes its appearance first



upon the back and spreads rapidly over the chest and extremities, reaching its full development within a few hours.

**The Stage of Desquamation** begins the third day and lasts five or six days. The contents of the vesicles become cloudy; then the vesicle begins to dry in the center and a brownish crust forms and becomes detached, and leaves a faint red spot, which disappears in a few days. Occasionally pus forms and leaves a pit, which will permanently mark the site of a few vesicles; but this condition is accidental and not the rule.

**Treatment.**—A light diet, as in scarlet fever and measles.

## HEREDITARY SYPHILIS.

Hereditary syphilis is a chronic constitutional disease, acquired during foetal life from one or both parents. It is caused by a specific virus of bacteriological origin, and is usually transmitted by the father. If the mother is affected, the pregnancy generally terminates early in abortion or miscarriage. The father may infect his offspring and the mother remain healthy and nurse the child without becoming infected, but a syphilitic child will infect a healthy wet nurse. It is impossible for a syphilitic father to beget healthy children. Hereditary syphilis is found in two forms; in one it develops in utero and in the other very soon after birth. In the first form the children are either born dead, die soon after birth or live to suffer from the severe lesions of disease. In the latter form the disease is more susceptible of treatment. Syphilitic children born dead present all the lesions of the skin and mucous membrane, from the simple discoloration of the skin to the pustular eruption. The skin sometimes peels off. Deformities are often present, due to retarded development. Those born alive are weakly, puny, and have no snuffles. The muscles are soft, flabby and wrinkled; the skin wrinkled and covered with the rash which soon develops after birth, sometimes within a few days. Mucous patches or hard lumps are found around the throat, and the angles of the mouth are crooked, sore or ulcerated, which heals, leaving a white sore. The soles of the feet and palms of the hands are ulcerated and peel off; the eyes are sore, especially in the angles and upon the edges of the lid. There is an offensive nasal catarrh, which discharges pus and ulcerates the angles of the nose. Children when affected as above, soon perish or may live to have more symptoms develop later. Some children are



born healthy, the characteristic lesions developing within three or four weeks. Syphilitic children in general have an old look ; they are emaciated, restless and irritable ; the skin is dry, scurfy and wrinkled, of a smoky or dirty tinge. All the organs are affected by the disease ; muscles, bones, skin, glandular structures and mucous membrane. The eruptions are macular, papular or pustular, but the pustules have a dark brown or black center, the pus showing around with hard, reddened edges. In the subcutaneous tissue abscesses form and often rupture ; the skin becomes puckered and discolored, forming scars ; wasting of tissue occurs, causing the wrinkling of the skin. In the glandular structure enlargements occur, especially in the groins ; tumors of a gummy character develop in the liver, spleen, kidneys, renal capsules and lungs. Abscess of the thymus glands are common. On the mucous surfaces the lesions are similar to those on the skin. Patches form on the tongue, cheeks, pharynx, stomach and intestines ; cause inflammation and nasal catarrh and bronchitis, indigestion of the stomach and intestines ; sore eyes, causing blindness ; discharge from the ears, causing deafness ; the nasal catarrh causes ulceration of the bones of the septum, allowing the nose to sink, sometimes leaving nothing but an opening to breathe through. The testicles inflame, causing destruction of those organs. The prepuce ulcerates and sometimes sloughs off. In the female leucorrhœa may be present, causing deformities of the vagina and uterus. In the muscles there is lack of nutrition and want of development. The bones ulcerate, and resemble rickets, in that the joints become enlarged, while the shafts soften and easily bend. The teeth are saw shaped, and have the appearance of being broken, lacerated and decayed ; the hair dry and brittle ; the nails thickened and brittle. The nervous system suffers as well as other tissues. Fibrous and gummatous deposits take place, causing paralysis, local or general epilepsy, hydrocephalis, idiocy and a general retardation of developments.

**Prognosis Varies**—The disease is self-limited. Anything which will improve the nutrition and health will cause a more favorable termination. Breast-fed children and those in whom the appearance of the disease is late have good chance of recovery. Those in whom the symptoms develop soon after birth and bottle-fed children, born with pustular lesions on the skin, usually last but a few hours.

**Treatment.**—All successful practitioners of medicine, regard-



less of school or pathy, now practically admit that there is one remedy that is all most specific in this disease, and that is mercury in some form, either by inunction or calomel with chalk. The inunction may be practiced daily, using the mercurial ointment, in from fifteen to twenty grains, rubbed in with the hand or smeared upon a cloth and kept in contact with the surface of the skin. Calomel can be given in doses of one-twentieth of a grain, with a little sugar of milk dropped into or on the tongue, three or four times daily. The mixed treatment consists of iodide of potassa alone, or the compound tincture of iodine, a saturated solution given in drops every four or five hours. The general health should be carefully watched. Baths, clothing, air and exercise should be only the best.

## TUBERCULOSIS.

### CONSUMPTION.

Tuberculosis is a specific infectious disease accompanied by tubercles which owe their origin to the bacillus tuberculosis, a small bacilla, having the appearance when under the microscope of fine wire nails or of fine hairs of strawberry jam appearance. It is never inherited, always acquired. The conditions favorable to it are faulty hygiene and food ; heredity produces the weakness of the lungs, enabling the germs which are in after life taken into the system to form the tuberculosis. The exciting causes are grip or influenza, measles, pneumonia, inflammation of the bowels, or any debilitating disease.

The bacilla tuberculosis are rod shaped, one third the size of a blood corpuscle in width, and about five times longer ; they are slightly curved, have rounded edges and are provided by spores which are found in all tuberculous lesions and the fluids coming from the parts affected. The changes of tissue when under the influence of tuberculosis is increase of all tissue by the formation of giant cells. Inflammation of fibrin, red and white blood corpuscles. The bacilli attack the epithelial cells and start them into a nucleus of tubercle ; these vary in size from the point of a pin to that of a split pea. The smallest are pearly and transparent, the larger ones white and opaque ; they are clearly connected to the tissue in which they are developed and are distinct. They contain no blood vessels. Caseation or degeneration into a cheese is the rule and caused by (necrosis) destruction of the cell elements and the formation of a fine, dry, white, grayish mass.



As a result of the white initiation caused by the tubercle which is now a foreign substance as much as a splinter would be. The tissue around the tubercle undergoes inflammation and inflammatory inundation. The exudation being fibrous, hemorrhagic purulent, new tubercles appear and new creations form and the intervening tissues becoming involved, the tubercle cavity already formed, thus steadily increases in size. Tuberculosis is always attended by cheesy formations.

Tuberculous children have white transparent skins, with blue veins, large lustrous eyes, and bright red lips, are nervous and precocious, or they have large heads, coarse features, flabby and thick skin and are apathetic and dull. The symptoms are pale and sallow complexions, redness of one or both cheeks, a blue sclerotic of the eye, the skin hot and dry and towards the end flabby and wrinkled, digestive disturbance with thirst and quickened pulse, hectic flush of the cheeks and fever. Sweating around the head, shortness of breath, appetite is not always affected. If the lungs are affected, there will be coughing, if in the joints, swelling and inflammation and formation of pus. Late in the disease there will be diarrhoea, with swelling or dropsy of the ankle joints.

In tuberculosis of the skin, the disease assumes the form of eczema, ecthyma, impetigo and lupus. The eczema assumes the form of a simple red exematous patch. It attacks the face and scalp. Upon the latter, thick crusts form, matting the hair together, and there will usually be a corroding exudation. There is intense itching and it is apt to become chronic and attended by prolapsus. The habit of using other people's combs, brushes and towels has caused this form of the disease to become very common.

The impetigo consists of pustules on an inflamed base, drying into thick brownish scabs.

Ecthyma consists of pustules, merging into ulcers.

Lupus appears as thick red elevated spots upon the skin. Sometimes they are bluish red tumors, or deep uneven ulcers, which may gradually spread. It usually appears on the face or at the angle of the nose and is very chronic.

Tuberculosis of the lymphatic glands consists of an enlargement with swelling of the glands structure. Those most usually involved are the cervical, axillary, or inguinal. There may be simply an increase of tissue causing the glands to be enlarged, which remain stationary sometimes for months before they break



down and are discharged as pus, leaving thickened and sometimes fistulous openings and tenderness with fluctuation when pus forms.

Tuberculosis of the lungs in children, cavities form, as in an adults there is shortness of breath and the cough begins early and lasts throughout the disease. It is dry, short and hacking at first, later it is moist and spasmodic, resembling whooping cough; expectoration does not always occur in children as they swallow the sputum, there is pain referred to the front of the chest, extreme emaciation, prominence of the superficial veins, swelling of the finger joints, swelling of the face and neck. The fever is the hectic variety; the disease appears as the acute and the chronic variety; in the one case it is rapid and appears in the other organs besides the lungs; in the other, it is prolonged through several years with intermissions terminating in recovery or death.

**The Treatment.**—General hygiene is very important. A warm, dry climate being the best and one that is obscure, 2000 ft. is said to be the limit as no germ can live above that altitude. Out-door exercise, pure air in the living rooms, woollen clothing, a highly nutritious diet, one of the very best foods is milk, both butter and sweet-milk cream being best of all. The use of fats, plenty of good fat meat, veal kidney roast, and even pork will aid as the system must be built up by some form of fat. Cod liver oil, beginning with small doses, and gradually increasing till a tablespoonful can be taken. Cotton or linseed oil mixed with cream and sugar answers the purpose fairly well. The preparations of iron and iodine and phosphorus, or the hypophosphate of iron and soda. But the very best and one of the cheapest treatments is sulphur, ordinary flour of sulphur of the drug stores, give in teaspoonfuls daily, or three times a week, will surely arrest and often cure this dreaded disease. The patient should avoid all debilatory or indoor exercise or work, pure fresh air is a sheet anchor in this disease.

**Treatment of Special Conditions.**—In the eczema of the skin, besides the general treatment, remove the crust on the scalp by first softening with oil. If the hair is in the way, have it clipped near the scalp, then apply some soothing stimulant, ointment or oil of tar. Restrict the use of water and do not allow scratching with the nails or a comb. Simply use a stiff brush. Lupus should be treated by some escharotic paste, such as arsenic, chlo-



ride of zinc or other equally destructive liniment with the general and constitutional treatment.

**Treatment of the Nose and Ear.**—When tuberculous discharges come from the nose, in addition to the general treatment, there should be used a spray of some of the general or local germicidal preparations, such as oil of wintergreen, ammonia, etc., which can be obtained in the shape of tablets for sale by nearly all druggists, or the catarrh tablets, which can be obtained from the author at a very low price, combined with oily preparations, and sprayed into the nose two or three times daily. In running ear, the boracic acid blown into the ear is the very best treatment, when the pus is removed by washing with peroxide of hydrogen.

### TUBERCULOSIS OF THE JOINTS.

The ends of the bones which enter into the joints may be attacked by tubercular inflammation, which may terminate in suppuration and always in caries. This inflammation extends to the



TUBERCULOSIS KNEE JOINT.

joints, causing pus to form, and perforation and distraction of the synovial membrane and cartilages. Destruction of the bones of the joint or inflammation may occur. A thickness of the tissue of the joint; then ulceration and the formation of pus, which may burrow and form deep sinuses. The joint swells and the skin becomes thick and flabby, and the muscles become flabby and undergo fatty degeneration, and finally the bones themselves become involved and destroyed.

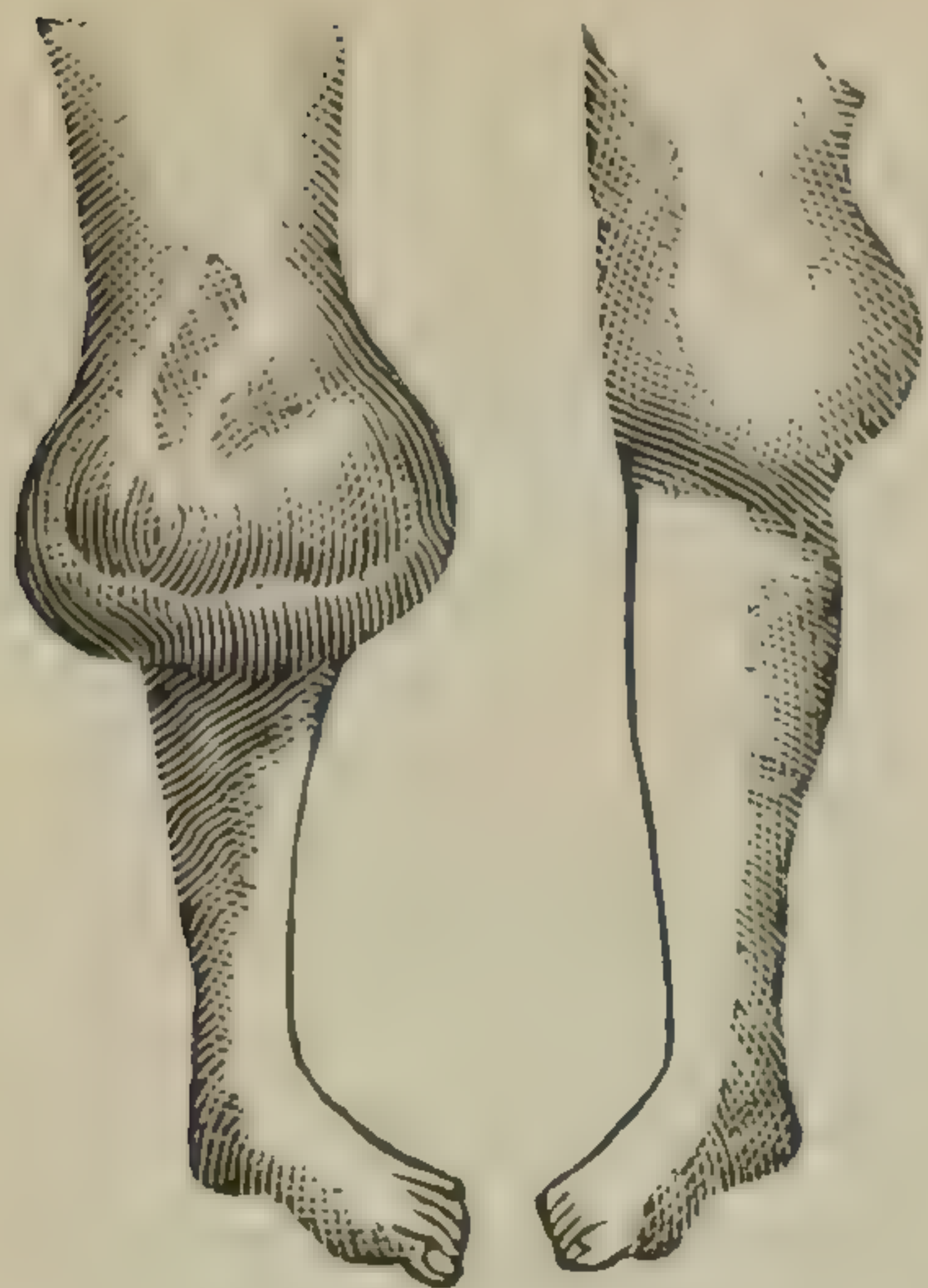
**The Symptoms** are fever, with a chilly sensation, restlessness, anæmia, pain at first intermittent; later, it will be constant and aggravated by pressure. The joints swell; are hot, red and stretched, and show the blood vessels. The disease may terminate in recovery without destruction to the joint, or it may partially derange the function of the joint or wholly destroy it, resulting in ankylosis (stiff joint).



TUBERCULOSIS ANKLE JOINT.

**The Treatment** is the same as in general tuberculosis. Local applications of iodine; early evacuation of the pus for this purpose,





TUBERCULOUS SWELLING OF KNEE,  
COMMONLY CALLED WHITE  
SWELLING.

etc., should be provided with clean rags with which to wipe up the discharge, and these should be burned. Too many persons use handkerchiefs which they pick up along the streets, or in car seats or other places, and in using these they contract tuberculosis in some of its forms. Persons should also be careful in kissing. This filthy custom should be prohibited by law, as it is a most frequent source of infection.

the old-fashioned seaton may be employed to cause free drainage of the joint. But never allow any cutting operation to diseased joints. Surgeons are often bold, fearless operators, and they often leave their victims suffering with a general tuberculosis. For this same reason the treatment of cutting out all glandular inflammations is bad, resulting in two-thirds of the cases becoming general tuberculosis. The pus from tuberculous conditions is infectious.

Persons suffering from catarrh of the nose, running at ear, chronic abscesses,

### POTT'S DISEASE OF THE SPINE.

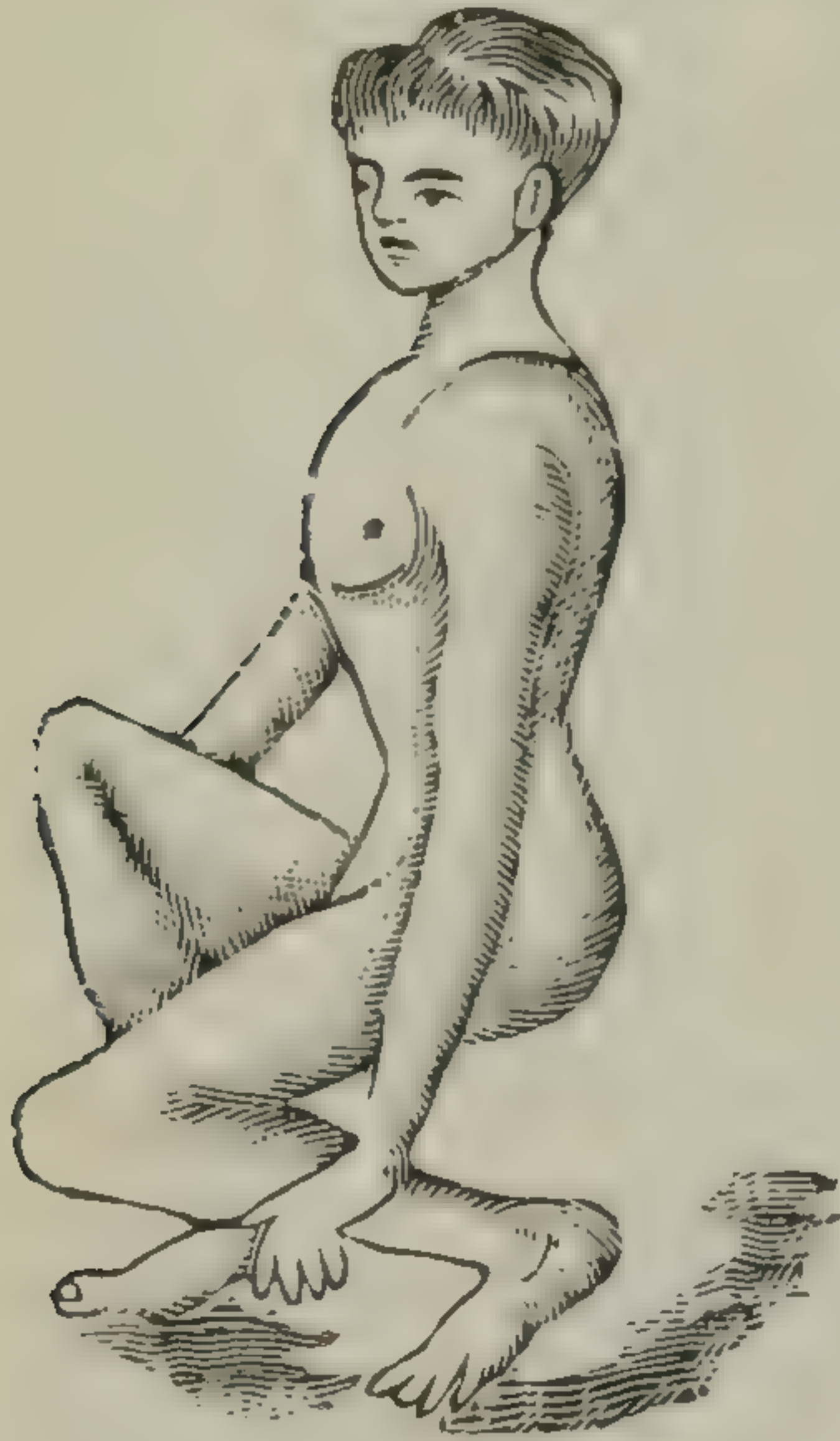


TUBERCULOSIS OF BODY OF VERTE-  
BRA, CAUSING HUNCH BACK.

This is an inflammation of one or more of the bodies of the vertebra ending in ulceration and destruction of the bones. It is tuberculous in character and usually excited by some injury. The disease begins in the centre of the body and spreads outward and thence to the soft parts causing abscesses which burrow and pain at some distance from the spinal lesion. The ulceration is most common in the dorsal vertebra, but it may originate in any one of them. When once it involves the vertebra, it usually causes curvature of the spine which is either forward or backward or lateral. The symptoms in general are spinal pains, stomach pains, or belly ache, tender spots on the spine upon pressure, rigidity of



the spine and the child squats, does not bend to pick things up. Pressure on the head causes pain and later the curvature of spine. Attendant upon these will be irritability of the stomach, restlessness,



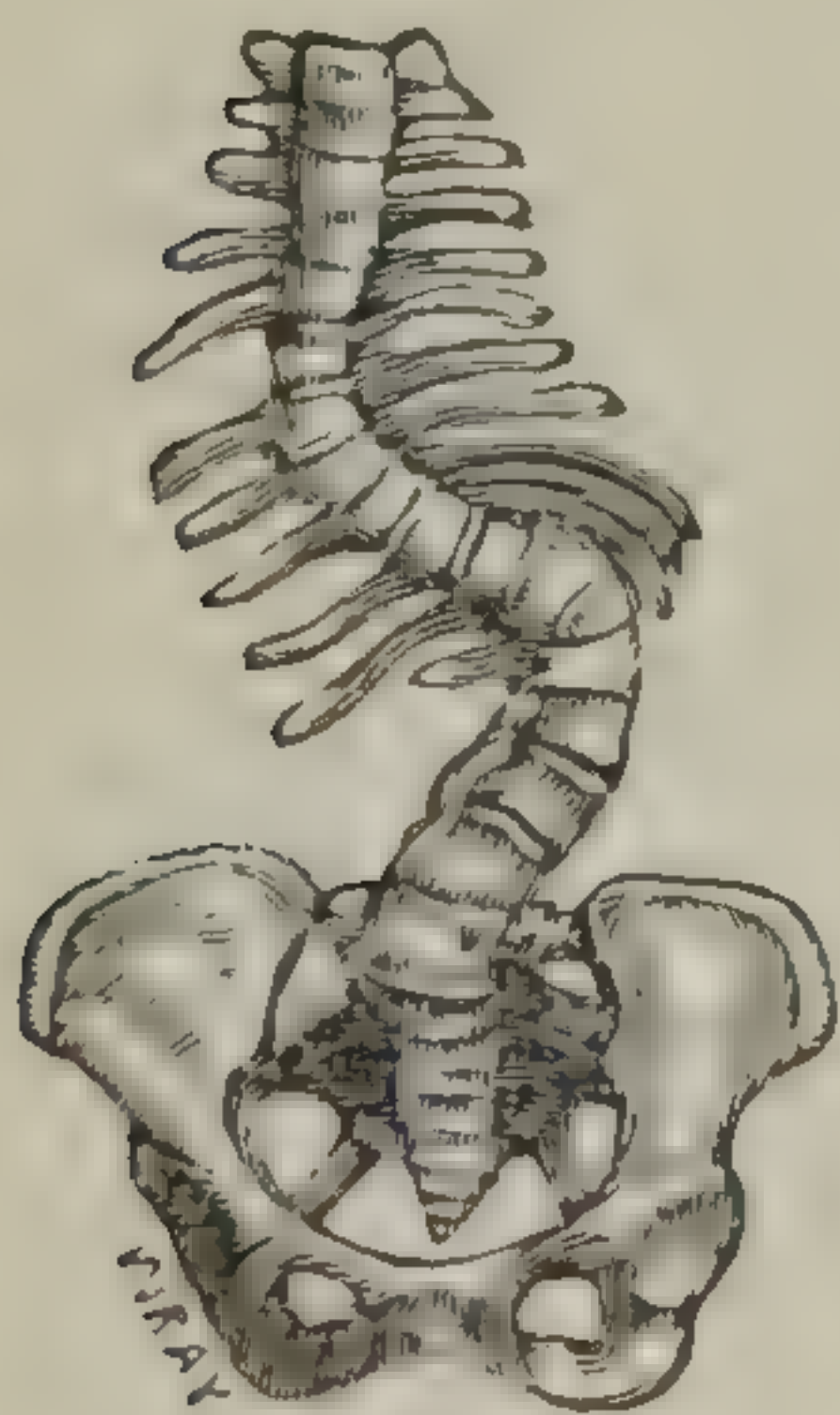
POSITION OF PATIENT IN  
POTTS' DISEASE.

sleeplessness, fever emaciation and anæmia. When the disease is in the cervical region, the head will be supported by the hands of the child, or the neck will be kept stiff, the neck swells and twitching of the muscles and paralysis may occur. When the disease is in the dorsal region, the spine is kept rigid and supported by the hands on the thighs, the head is drawn backward and buried between the shoulders. Pains are felt in the lower extremities followed by spasmodic affections, and later paralysis, constipation or paralysis of the sphincter muscles may appear. When the lumbar vertebra is affected, there is pain in the sacral region,

contraction of the thighs and pelvic abscesses. The treatment is the same as tuberculosis, except the supporting of the spinal column by suitable apparatus and the early evacuation of pus, use of the cathode rays to photograph the point of inflammation and the injection of iodine into the diseased joint.

## RICKETS.

Rickets is a constitutional disease, due to perverted nutrition. It effects nearly every tissue of the body, and results in deformity of the bones. It is caused by bad air, poor food, absence of sunlight,



CURVATURE OF SPINE  
FROM RICKETS.

debilitary diseases, and is hereditary, occurring in races of people. The colored race is most liable, the blood is deficient in lime or earthy matter, allowing the bones to soften, or at least the hardening process is delayed. In the long bone the new bone deposited beneath the periosteum is soft and deficient in the hardening matter. On boiling, the animal matters will not yield gelatine at the ends of the bones; ossification is slow and irregular. The border of ossification is senated. The medelary or marrow cavity increases, extending beyond the border of ossification, and is

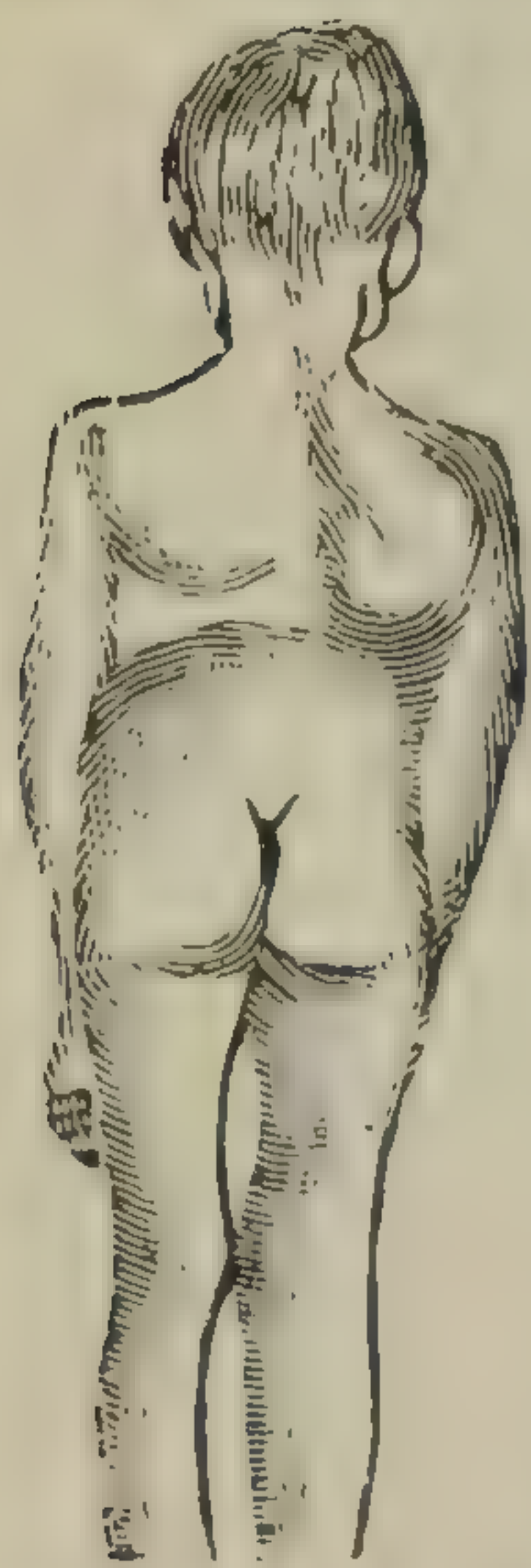


filled with pulpy matter of a reddish color. As a result of these changes, the bone is shorter than normal, has enlarged ends, and is easily bent. In the flat bones, the circumference is thickened, and the center thinned. The fontanelle closes too late, the sutures of the bones of the head are thickened and not firmly united, the ridges being due to the earthy deposit. The liver, spleen, lymphatic glands are larger and harder than normal, the brain is enlarged, caused by an increase of the white matter. The muscles are pale and flabby. The ligaments enlarged and relaxed. Rickets rarely occur before the sixth month, or after the eighth year. It may occur during uterine life or as late as puberty.



RACHITIC CHILD.

**The Symptoms of Rickets** are insidious and not easily noticeable. At first there will be imperfect nutrition, the patient does not



DEFORMITY OF SPINE DUE TO RICKETS.

thrive, is all that can be noticed in the start; the appetite is good, but growth is retarded; the patient is peevish, wants to be let alone; looks puny, loses his plumpness; there is no pain due to hyperæsthesia of the skin. There will be constipation, alternating with diarrhoea. At night there will be profuse sweating, and the patient will throw off the bed covers. The hair is thin and short, especially on the back of the head; the stools are very offensive; the muscles are soft and flabby; the ligaments are relaxed, allowing the joints to be abnormally movable; dentition is delayed and irregular; the teeth being poorly formed and decaying early; the temperature is irregular, but below normal; thirst is marked.

During the second stage the bones become softened and deformed. On account of the weight of the head the bones of the legs and back are more deformed than the rest of the body, but the ribs and the arms are often bent and out of shape. The head become rectangular and box-shaped, elongated, hollowed or flattened on top and at the sides; the back part of the head projects and becomes prominent; the bones of the head do not ossify completely, leaving enlarged fontanelles, cartilaginous openings of individual bones with elevated bony edges. The spinal column may bend backward, forward or to the sides, either in a straight



curve or with an angle or both. The spinal column from the relaxation of the muscles and ligaments sometimes presents the form of the letter "S," or "V"-shaped protuberance may exist, combining with the regular curve; the bones of the vertebra are softened, sometimes absorbed, producing horrible deformities of the joints at the wrists, knee and ankle are enlarged and club-shaped. The ribs from the tension and pressure of the muscles attached become distorted, causing flattening or protruding of the front of the chest commonly called pigeon breast. The abdomen is pushed out on account of the enlarged liver, spleen and kidneys, producing "pot-belly." Gas accumulates in the intestines, increasing the distension. Club feet are always a result of this disease, the softening of the muscles and ligaments with the enlarged end of the bones and softening of the shaft allowing the feet to assume awkward shapes. After these symptoms exist for a time, there is a general improvement of the system and a general improvement takes place, increase in the body weight; the blood supplies more of the earthy salts and the bones become hardened but remain in the shape assumed in the second stage of the disease and unless aided by a specialist physician or surgeon the deformity becomes permanent and is then incurable by operative procedures.

**The Prognosis** is good ; very few patients die with this disease ; as to the deformity, very much will depend upon the care and treatment received. Too many persons think that the family doctor is a cure-all. The truth of the matter is that he is simply a good general adviser, a specialist in the treatment of acute diseases, but in rickets and kindred diseases he had better be consulted as to who is best, unless you are acquainted with some specialist in this particular branch of surgery.

**The Treatment** should be to improve the general health, by adopting a more suitable diet ; the use of soup, made from the joints of beef or other bony articles of diet—fish fried, stewed or baked, bread composed of unsalted flour, and if possible, that which is grown on clay or phosphate ground will be best. Milk as a diet as well as a drink will be found first-class; water containing a large amount of lime is best, but lime water can be easily made by taking a lump of lime the size of a walnut and putting it into half a gallon of water and a tablespoonful of this given two or three times a day in milk



is good in building up the bone tissue. Sulphur will also be found useful ; a teaspoonful given two or three times each week. If there be any indigestion, a little saccharated or elixir of pepsin can be given with each meal. If there is constipation, castor oil, or the syrup of rhubarb and a little soda added, will soon cure this. If the patient is nervous or fretful, he should have full doses of bromide of potassa. But such remedies as iron, phosphorus, quinine, lime or cod liver oil will be the stand-bys when associated with suitable braces or other means of support.

### INFLAMMATION OF THE PERIOSTEUM OF THE EAR.

Periostitis is very common and a dangerous disease of the middle ear. When inflammation of the internal or middle ear occurs, its onset is usually sudden and begins first in one ear ; soon, however, followed by pain and inflammation in the other.

The pain is intense, of a cutting, boring or tearing character, which extends to the cheek, temple, back, head, neck and jaw. It generally increases and sometimes causes convulsions. It is worse at night and is aggravated by noises and movements. At first there is slight singing and then a buzzing sound in the ears which increases and is followed by deafness. Young children when affected by earache of this character, are restless; pluck, pull or rub the ear and will burrow or rub the head on the pillow, if in pain, and make the loudest outcry when the ear is pressed upon. The disease terminates with the escape of pus from the ear, which continues, when neglected, for years, followed by total or partial deafness, sometimes convulsions and death.

**The Causes** are tuberculosis, syphilis, scrofula. It frequently follows an attack of diphtheria, scarlet fever or measles or injuries to the ear, from foreign bodies, etc.

**Treatment** consists in relieving the pain as soon as possible, which can best be accomplished by a full dose of opium, laudanum or paregoric. Locally, cocaine and a ten per cent. solution should be dropped into the ear, or a small piece of cotton soaked and let remain in the ear, with steam from water or chamomile tea or hot fomentations gives quickest relief. When pus forms, it should be let out by having the physician lance the drum of the ear. After the pus has been removed, the ear should be washed



out with a syringe, using warm water medicated by boracic acid, carbolic acid, etc. To remove the crusts, a little glycerine, sweet oil, etc., or some almond oil can be used. When the discharge becomes chronic, use the pulverized boric acid and blow the ear full, following on the second day by washing the ear out with warm water and castile soap. Continue until a cure is effected.

### CIRCUMCISION.

The glands on the inner surface of the prepuce secrete a peculiar caseous substance which may accumulate and become the source of irritation and serious disease. To prevent such disorder and insure cleanliness, the operation of circumcision should be performed. This practice is followed by several modern nations dwelling in tropical climates; they also advise the removal of the nymphæ in the female, so as to allow the daily washing and cleansing, necessitated by a similar secretion. Daily washing should begin in infancy and be continued through life, and will prevent much disease.

### GOVERNMENT OF CHILDREN.

This is a subject that requires more attention than we can afford to give in a book of this size. The question of corporal punishment and moral suasion to compel children to mind has been well reasoned out and to-day in the public schools we seldom hear of the use of the rod in correcting children. But to make children mind the parents and conform to their wishes up to the age of puberty, but not longer, (for puberty creates sense and independence,) is a question which must present itself to every family sooner or later. Coercion and moral suasion are directly opposite means of securing obedience, and every child must be governed almost entirely by the one or the other.

**Punishment** at any age never does any good because it contraries every law of mind, it humbles self-esteem, hardens conscience, because they get the idea that they have been wronged which causes them to lose respect for parents and when it subdues it makes a poltroon of the child and lowers its resolution to cope with difficulties, crushes and unnerves the spirits. Such children become good-for-nothing flunkies and softies, an easy prey for those who wish to impose upon them.



All forced obedience creates defiance; the boy rebels in action yet appears to obey. All chastisement necessarily injures and must subdue or harden. Those who have been subdued become tamed, crushed and spiritless, while hardness necessarily inflames and infuriates all the rest.

**Scolding** is the same as chastisement, though less in degree, for it threatens punishment and creates the same feeling of antagonism. All you that scold had better whip, for you will succeed quicker and have less back talk and ruffled feelings. All threatening injures because it excites their antagonism or fear, and the effects of fright have caused convulsions, insanity and death. For this reason never lock a child up in a closet, or frighten them by telling them of ghosts, or bloody or raw bones, and gaping heads or anything else terrible. All forms of punishment act upon the nervous system; children who are nervous become almost crazed during punishment. This shocks the nervous system, increases its temper and injures the constitution. As all antagonisms antagonize and hardens, do not contrary, simply treat the child as you would wish your husband or wife to treat you.

The sweetest things on earth are children, especially infants; their feelings are normal and necessarily sweet, innocent and tender, but this infantile sweetness soon becomes soured and calloused by scolding, much more by chastisement. The first few scoldings cause it to cry as if its heart would break; but a few more hardens it and it will clench its fists in defiance.

**Moral Suasion** appeals to the conscience; then to show the child which is right and which is wrong will compel it to accept the right when told in a kind and loving manner. But try to force them and they will do wrong for spite and to be contrary. The use of force will compel them to resort to trickery, and make liars of them, and the more the punishment the more artful liars they will become, while putting matters to conscience and a sense of what is right and wrong will secure obedience in the most effective manner and secure it forever afterward.

Never compel a child to keep still. It is its nature to keep in motion and it is contrary to its own instinct. Never join in argument oftener than you must, and to keep telling and telling them not to do this, that and the other will be sure to break down your authority; they become used to your reproofs and become hardened against you. Remember, all their wants were made to



be gratified and not resisted. Indulgence soothes nervous children and benefits them while denial infuriates and deranges them.

**Cultivate Self-Defense** in children. Every child must grow up and live among aggressive and selfish beings, who will invade his personal rights as often as possible ; and, unless stoutly defended, they will be trampled upon. Children should be taught to fight their own battles, and told to allow no one larger than themselves to impose upon them. They will then grow up self-supporting, self-defensive, and will be able to ward off all imposition.

**Train Your Children According to Their Characters.**—Different children are influenced by different and often directly opposite motives. Then study what motive will be used to rule this child. One can be touched through feeling, another through kindness, another by love, or conscience, another by money or presents. But learn the ruling motive, its likes and dislikes, and you will have no trouble in having obedience.

**Cultivate Talents.**—Cultivate talents in children and you will have happier children, and when grown up they will be more successful men and women. Every mother should know that this child has this gift and that child that gift, or tact, or moral excellence. Then cultivate these talents ; bring them out and develop them. If they like drawing, encourage them to draw ; if they are mechanical, encourage them in mechanism ; if they delight in play, encourage them to play ; if singing or music is their desire, educate that talent above all else. Music in the home is a great purifier ; it softens and soothes every spirit. Therefore cultivate it in all the children, if they have any talent for it, at once.

**Direct Their Wills,** but never crush them. To be able to induce children to will right is a great art. Teach them love and conscience, and they will do right. Then when they will right, let them have their wills. Tell and show them which is right and which is wrong, which is good and which is bad, which is happy and which is miserable, and you will have no trouble to have them will and do right.

**Patience and Perseverance.**—Patience should be taught to all children. When children are impatient, they accomplish little, but should they possess this with perseverance, they will be able to



accomplish many things which it would seem impossible without. Some such games or puzzles as requires perserverance and patience, can be purchased at the stores at a very small cost, and will not only teach them patience and perseverance, but will, at the same time, furnish them with much amusement. Patience is the secret of success. When united with perseverance, no child need fear of failure in any undertaking.

**Order.**—Never fail to teach order to all children. Without order, no great good can be accomplished. The child will lose its clothing, dolls and toys where it used it last—will grow up to be a sloven. If he be a boy, his business will have no system or order ; his clothing will look out of place and untidy. If he be a mechanic, his tools will be scattered about, and he will lose much valuable time hunting for them. Commence to train them in this important matter from the earliest days of childhood. Teach them to have a place for their playthings and to keep them there ; have a special hook for their clothing and have them keep them when not in use on that hook. All boys should have one or two years at some bench wood working trade, as this will learn them order quicker than anything else, when neglected at home. Girls can learn to cook and have a place for each utensil and keep it in its place.

**Example.**—Setting a good example is better than precept and parents should do only those things which they would have their children do. If the parent swears, lies, steals or chews tobacco, he can expect his boys to do the same. If he be a preacher and acts the hypocrite, the children are sure to turn out bad. Parents who are cross and continually in an ugly mood, can expect nothing but cross and ugly children. Those who lie to children, can only expect to raise up a family of liars. If you promise to do something for the child, do it. If you refuse, stick to it and do not allow it to tease. But be careful never to make any promise you do not fulfill to the letter. By being truthful yourself, you will compel them to be true.

**Mothers are the Natural Educators** of families. When any-one is sick, mother is expected to doctor and nurse them. If a finger is smashed, mother is expected to tie it up. A mother, then, can move and govern her children as she wills. Children generally follow the mother in matters of religion, because she first taught them their religion. Love is her means of accomplishing



this great end. All children love those who love them, and when a mother loves her child, she, through love, can persuade it to do as she wishes.

### HABITS IN CHILDREN.

The force of habit constitutes a power which parents should never lose sight of. They should watch and early begin the corrections of all bad habits which are begun, as well as prevent new ones from forming. Habit is a power either for good or for evil, and good habits are as hard to correct or break as bad ones, though it is a duty to see that only good habits are allowed to take root in our children. When the tree is small it can be bent and compelled to grow as you wish it ; so can the child. Hence, we cannot begin the training of children too soon.

The infant should form the habit of sleeping regularly and alone. The first day of its life is not too soon to begin this training.

Regular habits of sleep now mean regular intervals of sleep for the mother, which will allow her to build up and gain strength, and, when continued in after life, will aid in building up the body by giving the proper amount of sleep.

The taking of proper food at proper intervals should also begin with the first days of the life of the child. The overfeeding of an infant, by the mother allowing the child to nurse at every little whimper, does much harm by reducing the mother's strength and causing indigestion in the child. Two-thirds of the colics and bowel complaints in children are caused by neglecting to have a regular time for nursing. When the child grows older mothers make a great mistake in giving it pastry, cakes, etc., at meals, instead of plain, nutritious food ; thereby encouraging a capricious appetite, instead of teaching it to like everything that is healthy and nutritious.

Regular hours for eating are as essential for children as for adults, and the habit of giving children pieces of bread and butter, cake, etc., between times, besides causing a fickle appetite and poor digestion, is a direct cause of vomiting, of diarrhoea and colicky pains, and, by deranging the stomach, is the most common cause of many of the skin diseases and fevers in children.



## HABITS OF CLEANLINESS

should be taught every child from the very beginning. There is no truer saying than that a dirty child is the mother's disgrace.

Every child can be taught to have a passage of the bowels at stated times in the morning and evening. The clumsy and heavy diaper can and should be dispensed with as soon as possible, which will be by the time the child is three months old. The mother can begin by holding out the babe immediately after nursing, and at the same time it can be easily taught to urinate. This regularity in time of evacuation of the bowels and the bladder will be a great saving of labor to the mother or nurse and will teach the child habits of cleanliness which will follow it through life. When the child begins to crawl, the tightness of the diaper compresses the bones of the pelvis and stops the circulation of the blood in the limbs, therefore its use should be discontinued.

## EARLY SCHOOLING OF CHILDREN.

Some parents are foolish enough to think that sending a child to school at the age of three or four will give him a great education and in time make of him a great man. The truth of the matter is that the child, from being compelled to sit upon a hard bench in an unnatural and strained position, day in and day out, will not get sufficient exercise of the body to support the brain. As a result the brain in time must suffer, and, instead of a strong and well-educated child, we have but a weakling. Education is a good thing, but there is such a thing as too much education. Nearly all of the great men and women of to-day are so-called self-made men, who did not have the advantage of an early education. Men who when they were boys were compelled to work not only for a living for themselves, but to help support their parents, have risen to the highest positions in all callings and professions; and two of our late Presidents supported their parents and had very little schooling. On the other hand, who of all the great college graduates, who graduated with honors, have ever risen much above the ordinary level of their fellows? They are few indeed that have attained great standing in business or politics. Among the biggest failures as men of business, as writers, as professional men are the very men who graduated with honor at college. The habits of confinement necessary in



obtaining an education so undermines the physical tone that the brain in time becomes weak. Children should be educated, but not crammed, as they are to-day. They should be encouraged, also, to take plenty of exercise and in the open air. Educate the muscles as well as the brain, and you will have a well-balanced child—one that will succeed in any undertaking.

School is a good thing for children ; but position in school has much to do with the future success of the child. In school a child will form the habit of leaning forward, which in time will make it stoop-shouldered, pigeon-breasted ; thereby preparing the way to consumption. Then again, children lean the head on one arm or hand. This will be sure to form a curvature of the spine and compress the spinal cord, which indirectly interferes with the proper distribution of nervous influences to the limbs.

The foundation is to the house what good health is to the child. If the parent decides to have the child become a useful citizen he should begin by giving it a good constitution. Educate the muscles by allowing it to dig and play in the sand, and make mud pies. What is the difference if it does soil its clothing ? Water is cheap and conducive to health. Let the children run, play ball, climb fences, and trees, too, for that matter ; play horse with strings, roll the hoop, or do as they please, so that their little muscles will become as hard as steel, and the mind will become strong. When the time comes to learn something they will show a desire to study. But let them play, if you do compel them to sit confined in school all day. Try the experiment yourself of sitting upon one chair. Take an easy rocker, if you like, and sit there six hours every day, and see the weakening effect it will have upon you, and unless you take vigorous exercise you will soon be sick.

Then these future rulers of this great country of ours require muscle as well as brains. If they possess genius above their fellows they will soon show it. It has been said that Patrick Henry, when he was a boy at school, was so dull and stupid that he couldn't keep up with his class. But when the time came and his body was sufficiently developed, his genius asserted itself. Therefore, if your child has this talent, be not afraid—he will develop fast enough when the time comes.



## CHILDREN SHOULD NOT SLEEP WITH OLD PEOPLE

For the reason that children are in a positive electrical condition, while old persons are electrically negative, therefore receiving impressions instead of giving of electrical force. The child will lose force, become pale, exhausted, languid and dull, and will, if the practice be continued, become so weak as to be unable to resist disease; while the old will receive a corresponding amount of benefit, and become invigorated, clear and forcible. School masters from their daily associations with the young, become longer lived than others not receiving this life-giving force.

King David well knew the effect of this law of nature, and when he became old, he not only married young wives, but kept a supply of young women to sleep with him. So that his days was thus lengthened.

Invalids, especially mothers who associate daily with young children, prolong their existence by this habit. And old men and women who marry young husbands and wives are not such "old fools" as some persons think. While their young companions are at least not well informed as to the loss that they are subject to by such unions. Many old women hire young persons to sleep with them, that they may absorb this force. Therefore parents who value the health of their children should see to it that they do not sleep with persons older than themselves. and those who are sick should have a room and a bed by themselves, for the same reason. But those who are sick will receive benefit from the association of those who are physically strong, and a number of vigorous companions coming in from the daily exercise in the open air can impart an influence which will be greatly beneficial to the sick one, which if repeated often enough might be sufficient to carry the sick one beyond the point of danger and in time impart sufficient health force to bring their standard of health up to a level with the stronger ones.

## MASTURBATION.

Self-pollution is a habit that is formed very early in life. Most children, from being allowed to live upon a vigorous and stimulating diet, have the sexual instinct early developed and from not being able to properly indulge, resort to artificial methods of gratification. Parents should instruct children early in the physiological function of the body and the dangers from



this unhealthy practice. They should carefully exclude from them the reading of such novels as are intended to excite the passion, and, instead, place upon their tables good histories or physiologies and teach them the wrong of such practice, and you will do more towards giving your child a good, vigorous and healthy constitution than by any other education.

### CLOTHING.

The clothing of children is a subject that requires some little thought. Most mothers consult the fashion plate, more to secure fashionable clothing for their children than for themselves. All these should stop and think for a moment. What is the use of clothing? When the child is born into the world it has no clothing, the skin being the only covering that nature provided for it. But all civilized mothers go beyond nature's intentions and have prepared a long list of garments of all kinds with which to wrap up the new addition to the family. If the poor helpless little thing could have a say in the matter of clothing, it would settle the matter by having no clothing whatever. It tries to prove this by kicking off all covers, unless so tucked in and around as to be almost impossible to move or breathe, and should the babe be a girl, then the little thing must undergo a process not a bit less barbarous than is practiced by the uncivilized people of the world. Its little waist is encircled in a band which is usually pinned so tight it can hardly breath. In order that the natural form of the waist is made smaller, with each change of the band, the pins are placed a little closer and the band drawn a little tighter, until deformity is the result. This practice is no less heathenish than the practice of the Chinese in wearing wooden shoes to prevent the feet from getting longer, or the flat head Indians from compressing the heads of their infants to give them the flat-head from which they have received their name.

But is clothing necessary at all? This question is being answered to a degree in Ireland. A well-known physician is trying the experiment of raising his child without any clothing whatever; he has never worn a garment of any kind, and strange as it may seem, he does not have any feeling for heat or cold and even pain does not affect him; he sleeps on the floor upon his face, his knees flexed, his body upon the floor, and his hands and arms stretched out in front of him. His skin is a perfect pink color, and he seems to be exempt from all diseases affecting other



children. If this experiment proves a success, it will account for much of the disease found among children. We then draw the conclusion that scant and loose clothing in childhood, hardens and makes it healthier. Even in cold weather they should not be bundled and wrapped up tight. Mothers who have their children wear mufflers and comforters about the neck in winter time, find that their children are always taking cold, and they can not see why they forget that their little ones become heated at play and throw off their cumbersome clothing, and soon they cool off with the result they are always suffering from the cold.

Now as to shoes. Should these little ones go barefooted? If you live in the country, yes. If you live in the city, no. In the country there are but few disease germs in the dust, while in the city, all dust is more or less a living mass of germs; these little ones, although they get the comfort necessary to the feet, they are liable to cut the foot upon glass or stump the toe against some hard surface, the diseased dust settles upon the sore and is absorbed into the system, and this is a frequent source of infection of consumption in children. But when selecting shoes for little ones, be sure that they are wide enough, long enough, and manufactured from the softest of leather—a frequent coat of vaseline will aid in keeping them soft. In this way they will avoid the danger of both bruising the feet and of the infection of the great constitutional diseases.

And now a word about hats and bonnets. The Indians are never bald-headed; neither are the Chinese. The negro race is nearly exempt from baldness, and it is only of recent years that baldness appeared among them. Why is this? Indians never wear a hat; a few feathers stuck into his hair is all that protects his head from the sun, and see what a strong heavy thick coat of hair he has. It is only since the introduction of silk and felt hats that the negro has become bald. We see then, that nature intends for us to wear no head dress, or if we do, it should be composed of only light and porous material. What? You say they will become sunburned and tanned? What of it? Better be tanned and sunburned and have a good head of hair, than to be fair, white and bald. No, let these little ones have a chance to be what nature wants them to be. Protect the head only from the hottest sun, and in winter, light woolen hoods or caps made from yarn, loosely woven or knit, will be plenty warm for them, and will insure health, as well as prevent the custom of taking cold.



## DRINKS.

**Drinking** should be only of pure cold water or milk, or simple drinks. Many a drunkard traces his taste for spirits and strong drinks to childhood. The mother, thoughtless enough, may allow the child to sip wine, whisky and other spirits, thereby cultivating the taste for strong drink. Tea and coffee should be avoided for the same reason, for they also cause disorders of the nervous system and the digestive organs. Coffee alone is responsible for half of the indigestion among grown people. Then why should children be allowed to use what is known to be injurious to adults? Tea and coffee should be used very sparingly by adults. Spirits should not be used except as advised by a reputable physician, and even then very carefully.

## SIGHT.

**Training the Sense of Sight.**—It is a well-known fact that the children of to-day have a tendency to near-sightedness and nervous affection of the eyes, which can only be accounted for by the fact that we know more of the diseases of the eye than formerly. Children are taught to use their eyes in studying books and lessons from early childhood, and in the kindergarten, beginning at the early age of two or three years. This is not the cause of poor or weak eyes, but bad management of light. And insufficient or badly regulated light, coming from a direction that does not reflect upon the book or paper, is a cause that is easily remedied. The child should read with the light coming over the shoulders and falling directly upon the paper, and should never face the light. When the light shines directly upon the face and into the eyes, it will cause a disease of the retina. Bad printer's ink upon poor paper, printed with poor-faced and almost worn-out type, is another source of disease of the eyes, which should be corrected.

**Acuteness of Vision** is a point to be especially sought after. Children should be encouraged to look at objects from a distance, and train the eyes in seeing objects at a distance, as this causes them to focus better. Children reared in the country or at the seaside have more acute vision than those who live in town, for the reason that they are always trying to make outlines of objects at a great distance.



## TO EDUCATE THE SENSE OF HEARING.

Hearing is next to seeing in point of importance and deafness decreases our usefulness, mars our happiness, and retards our prosperity and increases our chance of insanity and suicide. Many of the causes of deafness originate in neglecting the simple catarrhal diseases of the nose and throat, or some obstinate skin disease, others allow the ear-wax to collect in the ear until the wax becomes hardened, and this pressing against the drum, sets up an inflammation, which in time results in ulceration. The nerve of the ear, which conveys the sensation of sound from the middle ear into the cochlea and brain can be strengthened and its usefulness increased by exercise and training. When there is a perfect state of health the hearing can be so developed that the ear can readily catch feeble sounds. Hearing can be educated by having the children try to hear a watch tick, and gradually putting it a little farther away, or children can have plays by listening to a clock, chronometer or some regular clicking noise and have them go a little farther away until the clock cannot be heard. These simple maneuvers will greatly improve the hearing. The hearing also depends upon the shape of the outer or pavilion of the ear. Physiologists teach that it ought to make an angle of thirty-two degrees with the skull, in order to best collect the various sounds or vibration of air. The angle can be very much altered by the head dress; a heavy cap or slouch hat presses them down to the great detriment of acuteness of hearing.

## TO DEVELOP MEMORY.

**Memory** should be developed as much as possible. This can be accomplished by fixing in mind the objects seen. The shape and size of objects, as well as shapes and sizes of different parts of the same object; also the color, and the differences in color of different parts of the same object.

**Local Memory** is the memory of localities. Children should be taught to remember the different outlines and any special trees, houses, creeks, bends in the road, or whatever is peculiar to any object in particular. This is useful in finding the way in the country or the city.

**Memory of Physiogomy** is the study of the different faces



one meets daily. Some persons can remember faces seen only once. Politicians and artists find this memory for faces valuable. The Greeks had developed this special memory so they could chisel the form of a face until the outlines were almost perfect. There are some persons who can never remember a face unless seen quite often. This is very embarrassing. Persons sometimes pass acquaintances and do not speak, because they do not remember faces ; others speak to everybody in order to keep from appearing impolite.

**Descriptive and Graphic Memory** is the memory of objects in such a manner as to be able to reconstruct them. This is the form of memory that is found so useful to designers of all kinds. To educate the child in this form of memory, it should be first taught to draw the outlines of some object ; then it should be taught to shade and fill in the picture to minuteness ; then to close the eyes and to draw some object with the eyes closed ; and little by little, in this manner, the mind will be taught to penetrate more and more into the detail of each object. This also educates the child to have correct observation, and it will soon develop the descriptive memory.

**Chromatic Memory** is the memory of different colors. This can be accomplished by taking skeins of yarn of different colors, hanging them up and having the child to separate the different colors ; also have him note the natural color of some object and have him try to imitate it in water color. In this way the child will soon be able to proceed and learn the different forms of objects. But we simply wish to give a hint at the proper way of training a child. The reader will be able in any public library to get books that treat on this subject in detail.



## PUBERTY.

For a period after birth the generative organs remain partially undeveloped, the growth of the ovaries is very gradual and the function of ripening and discharging an ovum every month into the fallopian tubes and thence to the uterus, is not fully completed until the ages of 11 or 13 years. This period varies according to the climate and surroundings of the female. The disturbance which precedes puberty are backache, headache, palpitation, corporal and mental lassitude, hemorrhages from the nose, lungs and stomach, occurring more or less regularly, every twenty-eight days. Puberty occurs earlier in hot climates. Luxury and idleness also hasten it, while severe labor retards it. It may also be retarded by poor health. While the aches and pains appear more or less regularly, the mind acquires new thoughts, the mammæ enlarge from the deposit of fat, and the cellular and cutaneous tissue of the extremities, also insures that roundness of form and type of beauty so much admired and prized by the opposite sex. She acquires a grace previously unknown to her; it is then the menstrual flow is established. Childhood is past and she is a maid; she is no longer the romping tomboy of yesterday; she has thoughts and motions, taste, habits and disposition of a woman, and is fully capable to perform all the functions of her sex. She soon assumes an air of decorum and becomes dignified and shows complete consciousness of the sexual maturity she now possesses. While puberty is established by the menstrual flow, and although this flow is almost sudden in its appearance, it is a condition that requires considerable time for nature to complete. When the ovules are discharged from the tubes into the uterus and if it remains unimpregnated it is discharged with a flow of blood which lasts four or five days and is repeated at intervals of twenty-eight days. This flow is known as menstruation and should occur regularly throughout the reproductive life of woman, (about thirty-two years), except when suspended by lactation and pregnancy.



## MENSTRUATION.

This is the name applied to the periodical discharge of blood from the mucous membrane of the uterus in women. It is nature's attempt to get rid of material it would require to furnish the life germ and is directly due to the fatty degeneration of the small blood vessels under pressure of an increased amount of blood in the reproductive organs attending ovulation. The blood vessels rupture and a hemorrhage takes place in the uterine cavity and from here into the vagina.

The periods occur regularly at intervals of about four weeks or twenty-eight days. The occurrence of pregnancy causes a cessation which lasts through lactation with occasional exceptions; usually associated with phenomena both local and remote, and also with the liberation of the graffian follicles.

Menstruation is the symbol of sexual maturity in the female and co-incident with its appearance occurs the phenomena of the development of the general outline common to matured females. The breasts become permanently enlarged, prominent, sensitive; the nipples become darker. A growth of hair forms upon the pubes and in the arm-pits. The pelvis becomes enlarged and of a different shape. The girl becomes more reserved and less of a romp.

Menstruation begins in the average about the age of twelve to fifteen but varies according to climate. In warm climates it begins earlier and ceases later, while in cold climates it begins late and ceases early, and is sometimes retarded until the sixteenth year. But there are cases on record of its beginning as early as the second year. Warmth, health good food and luxury with favorable hygienic surroundings cause it to occur earlier, while bad living and surroundings may cause it to be delayed for months. Chronic diseases, such as scrofula and consumption retard its appearance and hasten its discontinuance. Blondes begin later than brunettes. So long as menstruation occurs under favorable circumstances it is possible for women to bear children. The time of occurrence varies. It may occur at any time, but most women menstruate during the first quarter of the moon, and during the new or full moon comparatively few women perform this function.

The duration of menstruation varies in different individuals. The average duration is about one week; in some it lasts but two or three days, while in others it continues for eight days.



The discharge begins slowly and gradually increases to its fullest quantity. It then slowly declines and should it cease suddenly, some accident will have happened, such as a cold or disease and some systematic disturbance may be looked for.

The frequency of its occurrence also varies, some menstruating every three weeks, while others only every five or six without suffering any marked inconvenience or disturbance of health.

The discharge is at first slimy, but soon becomes thin, dark and bloody with a peculiar and characteristic odor, due to fatty acids and consists of blood serum disorganized, blood corpuscles and general debris of the decidua menstrualis.

This is a membrane developed by the uterus for the purpose of furnishing a site for the implantation of the impregnated ovum. It occurs only in the body of the uterus and is not found in the impregnated uterus. If pregnation does not occur the decidua breaks down and is washed away by the blood from the surface of the uterus where it was formerly attached. The blood is venous and mingled with mucus from the vagina. (See cut on page 40.)

The quantity of blood discharged averages about two hundred grammes, or five ounces.

The initial menstruation begins suddenly, or there may be only an increase of leucorrhœa for two or three months, with slight fever, but when the function becomes well established, there occur pains in the back, legs and loins, and a slight indisposition. The temper becomes more or less irritable, and there is a sensation of heat and cold, accompanied by a tenderness of the uterus and ovaries. One month one ovary will be tender, and the next month the other. Digestion is retarded, and the skin is less active, and the urine becomes scanty during menstruation.

The duration of menstrual life is about thirty years, beginning about the age of twelve to fifteen and ending about forty to forty-five years. If the menses begin early in life, they will continue late, and those beginning at eleven or twelve need not expect to stop before the age of fifty-five or sixty, and those beginning later at the age of fifteen or sixteen, will cease long before the age of thirty-eight or thirty-nine.

**Vicarious Menstruation** is that condition when the periodical discharge occurs from other organs, as profuse nose bleeding, vomiting of blood, diarrhœa and increased urination.

It has been claimed that any disturbance of any nature is



abnormal during menstruation, and that there should be no hemorrhage. Authors cite the cases of certain savage races of people whose squaws have no hemorrhage accompanying menstruation or ovulation. These cases are rare and exceptional and therefore abnormal. Some women do not menstruate, neither do they marry, this being due to the absence of the uterus and the ovaries, but some of these cases of entire absence of show during evolution, can be accounted for in vicarious menstruation; where monthly, a profuse nose bleeding, diarrhœa or other periodical discharge takes the place of the regular discharge or flow.

Menstruation can, to a great extent, be rendered painless, but this condition can only be brought about by adopting good healthy food, continuous exercise, and a system of dress that will be comfortable, and which will not compress the abdominal viscera. Dress reform has done much to bring this about.

Women, during menstruation, need take no special care of themselves, and they need make no change in their regular monthly living, but only take such care as will insure them against taking cold; for this reason, good warm comfortable clothing in winter, with thick shoes, should be worn. She should also take the regular amount of out-door exercise.

#### MENSTRUATION A CRITICAL PERIOD,

And is attended with many serious dangers to the maiden. It is the time when inherited disposition to certain disease is most likely to blossom into activity; the time when constitutional defects are most likely to manifest themselves. Each recurrence of the function renders her especially susceptible to morbid influences, and liable to serious derangements. Those inherited tendencies to scrofula, consumption and epilepsy will be likely to show during this time. The first two years of puberty are critical and determine the after condition of life. There is no time when the laws of hygiene should be more scrupulously observed than now. She should avoid taking cold and all unnecessary exposure, as well as severe physical labor and intense mental excitement during this period. Every endeavor should be made to keep the individual comfortable, calm and cheerful; pleasant and exhilarating exercise should be taken regularly; she should exercise in the air and sunshine as much as possible. Plenty of sleep should be allowed, as the loss of sleep predisposes to disorders of menstruation. Particular attention should be given to the diet. At this time she will require more food than at any other time. It



should be simply prepared, plain and nutritious, and taken regularly. She should be careful to attend promptly to the demands of nature—to the relief of the bowels and bladder. The clothing should be loose, warm and comfortable, so as to prevent taking cold.

At this early period a daughter is too young to appreciate the importance of slight deviations from the standard of health, even if she were able to recognize them. It is a duty which no mother should neglect, to inquire into the exact frequency of the periods, the amounts and character of the discharge, and other points necessary to ascertain whether or not there is any deviation from the natural condition of health. If there is pain, it is certain evidence of something seriously wrong. If there is irregularity in any particular, it is a matter well deserving of serious attention.

**Causes of the Functional Disorders of Menstruation.**—The causes of the functional disorders may be divided into general classes, predisposing and exciting.

The predisposing causes are neglect of out-door exercise, undue mental work during the period when the generative organs are developing, improprieties of dress, such as tight lacing, skirts suspended from the waist, resulting in uterine displacements and congestive disturbances ; improper postures, such as sitting down too much, running sewing machines, high-heeled shoes, leaning forward too much, etc.; habitual constipation; imprudence during menstruation, such as violent exercise at the menstrual period, going out too lightly clad or getting the feet wet, which result in cessation of the menstrual flow ; edometritis and other inflammatory conditions, with subsequent pelvic pain, etc., dysmenorrhœa, sterility.

## DISORDERS OF MENSTRUATION.

Certain disturbances occur during the beginning of menstrual life. In girls who inherit a tendency to scrofula and consumption, these disturbances receive names according to their form ; thus, amenorrhœa is absence of monthly flow.

Dysmenorrhœa is painful menstruation.

Menorrhagia is profuse menstruation. Among the most frequent sources of disturbance is the confining life, during childhood, mental troubles, city and boarding school life, the great struggle for



higher education, and more knowledge at the expense of the body. This should be discouraged, The beginning of the menopause is a most critical period. If the girl has any disturbance of menstrual character, it will be well to seek the cause and have her remain at home a year in idleness than to let her become a burden and a source of constant care. Men appreciate knowledge, but love good, healthy, strong females, and the parent who neglects to develop the feminine character, and to build up the daughter's health, is only making a bid for an inferior son-in-law. Mothers should seek the companionship of their girls. Be their most intimate friend. Teach them what is to be expected and how to take care of themselves. Tell them what these discharges mean ; educate them in the duties that are expected during married life, and you will not only aid in bringing about the conditions of healthy and painless menstruation, but will become a benefactor to future generations.

### AMENORRHŒA.

This is a suspension of the menstrual function in women prior to menopause.

Among the most frequent causes are consumption, scrofula, anæmia, or chlorosis, diseases of the ovaries and uterus, taking cold, prolonged menstruation, grief, fright, etc. When the monthly flow has stopped from any cause, it will seldom return until the cause producing it has been removed ; thus consumption and scrofula must be cured, and the general health must be built up ; the anæmia must be cured and the mind kept at rest. Women should not be alarmed about the suppression when there is no constitutional disturbance. The old notion that women would be better off if the flow was re-established, is a mistaken one, and there can be no serious results follow suppression from ordinary causes. It is only from the cause producing it that one should expect serious trouble. The mental strain sufficient to stop menstruation, is strong enough to produce insanity. A cold severe enough to stop the flow is strong enough to cause pneumonia or other serious trouble, and when caused by consumption, there is more danger of death through this cause than from the simple stopping of menstruation. Patients who suffer from suppression, caused by disease of the ovaries, and uterus, gain steadily in weight, when under treatment for these diseases.



The practice of dosing with pennyroyal and tansy teas, or other remedies that act upon the ovaries and uterus, should be avoided at this time, as they cause congestion and may result in inflammation, while they can not possibly do any good. Hot hip baths and hot vaginal injections do more to start the flow than almost any other remedy, but generally the flow will not be re-established until the next regular period. But do not be alarmed if it should be delayed for years; there can not possibly be any bad results from it. But see to the general health; take plenty of exercise in the open air—horseback riding is splendid for this purpose. Also have plenty of employment; take a cold sponge bath each morning, or sponge the spine with cold water of mornings and you can generally trust to nature to do the rest.

There are no drugs that exert any direct influence upon this. Manganese has been employed in some cases with success, but it should be prescribed by a physician. Electricity is the surest of all remedies, and it can be used by anyone, being perfectly safe. The electrodes can be placed, one upon the lower part of the back and the other above the pubic bone. To be successful, it should be used for fifteen minutes each day.

### DYSMENORRHŒA.

Dysmenorrhœa or painful menstruation, is a disease so common and frequent in its occurrence, that it deserves to be given some thought and attention. Some medical writers divide the causes of this disease into dysmenorrhœa from obstruction; and ovarian or uterine when caused by disease of the ovaries and uterus; rheumatic or neuralgic when caused from neuralgia or rheumatism. But the cause of painful menstruation should be looked for and as far as possible prevented in childhood. Mothers too often neglect to impart to a daughter knowledge that she is or soon will be a woman, or, false modesty tells her it is not good to tell the child these secrets. Many a young girl has been caused to suffer with chronic uterine and ovarian trouble throughout life, on account of the neglect of the mother.

Errors in diet, dress and want of proper exercise are frequent causes.

Mechanical closure of the womb is also a cause, the symptoms of which are pains before the establishment of the flow, which ceases as soon as it is fairly established.



In inflammation of the ovaries and womb, there will be pains in the breast, back and lower part of the abdomen, sometimes extending down the inner sides of the thighs as far as the knees, dragging pains in the pelvis with more or less mental distress, and enlargement of the breasts, which are not relieved but often aggravated by the establishment of the flow. Membranous dysmenorrhœa is an inflammation of the lining membrane of the uterus. The pain begins with the flow and it increases as the discharge increases. With this form there is frequently a discharge of membrane like the membrane of croup which will be found in clots or shreds of membrane, or there may be an entire shedding of the membrane forming the part like the cavity of the womb.

Neuralgic dysmenorrhœa is the form most commonly met with and the one that seldom yields to treatment. The pain is of a sharp, fixed character, and may be referred to the pelvic, ovarian or the uterine region. These pains begin before the flow and continue less severe during the discharge, but often stop at the establishment of it. During the inter-menstrual period, the sufferer will often have neuralgia elsewhere.

**Treatment** is both palliative and curative. When there is pain, it should be relieved as soon as possible. No sufferer from dysmenorrhœa should be allowed to endure these pains. It will act upon the nervous system and undermine the health and lower the vitality.

Hot applications in the form of hot stove lids, wrapped in a cloth and applied over the seat of the pain is a remedy always at hand and does much good. Then a hot water bag or a cloth wrung out of hot water and applied aids in giving relief.

A hot sitz bath is also good; to keep the patient in this till it excites a profuse perspiration, when she should be removed and rubbed briskly with rough towels until reaction sets in, then put her to bed and cover with good warm blankets to prevent taking cold. This is an excellent treatment, often keeping off an attack or cutting short one already established. A complete change of climate, fresh air and exercise is the most important. Corsets should not be worn. Hot mustard foot baths with hot vaginal injections, the patient going to bed and wrapping up in blankets, relieves cramps and pains when caused by cold, and exposure to wet during these periods.



But the removal of corsets and the suspension of skirts from the shoulders should be insisted upon as well as good, vigorous out-door exercise.

Mechanical means are the dilation of the neck of the womb by the uterine dilators and the introduction of a sound, daily, for two or three days before the expected time, but these should only be resorted to when all other means fail.

**Drugs.**—Alcohol and stimulants should be avoided. Girls who have these pains soon cultivate a taste for whiskey and stimulants that is very hard to break and frequently the patient will have cramps between the menstrual periods which nothing but spirits will relieve. This can be accounted for in the congestion and inflammation following the use of such agents. Hayden's viburnum compound, taken in teaspoonful doses in half a glass of water, is an excellent remedy. Tincture of piscidia in 20 drop doses is highly recommended. Laudanum, paregoric and other anodyne remedies should be given to relieve pains, but never repeat any oftener than possible.

Electricity relieves some cases. Lithiated hydrangia or the salicylate of tongalene are remedies of some value in the treatment of neuralgia and rheumatic pains.

## MENORRHAGIA.

Menorrhagia means a profuse menstruation, while metorrhagia means a discharge of blood from the generative organs between menstruation periods. A profuse discharge of blood nearly always indicates local disease of the lining membrane of the uterus, or chronic inflammation of the body of the womb, from retained membranes after abortion, or laceration or cancer of the neck of the womb, or may be caused indirectly by diseases of the heart, often malaria and the menopause. It is very often found associated with dysmenorrhœa, and is often caused by the same trouble. Menorrhagia when caused by polypus, cancer or tumor of the womb, will not yield to any treatment, unless the tumors are removed. Ergot alone, or combined with the fluid extract of cotton root, in teaspoonful to tablespoonful doses, repeated every hour until the uterus is felt to be contracted, is a remedy relied upon for years by the medical fraternity. These two remedies combined and administered for a time, will reduce the



inflammation of the body of the womb, sometimes reducing its size one-half in the short space of a month.

Cimicifuga, when there are heavy aching pains in the back.

Quinine in capsules of five grains each, continued every four hours, for some time, is useful in menorrhagia, in malarial districts. Arsenic in the form of Fowler's Solution, in six-drop doses every four hours, will often cure.

Injections of a strong solution of alum into the cavity of the womb can be tried when other remedies fail. There should be no air enter this cavity of the womb, as the air entering the veins has caused death.

Cinnamon tea is an eclectic remedy of some value. It can be prepared by using common cinnamon and making a tea of this, using tablespoonful doses every hour or two.

### GREEN SICKNESS OR CHLOROSIS.

This is a disease occurring just previous to menstruation, or just after, and never occurs after the age of twenty years, and is a disease of puberty, a disease of the nervous system.

The first indication of chlorosis is a distaste for society. The girl wants to be alone and cares little for associates; she becomes low spirited and melancholy; the appetite becomes fitful and often almost absent. The taste is disordered, and frequently she craves pickles, chalk, slate pencils, etc. She becomes languid and does not care to exercise; loses all interest in her surroundings. The blood is composed of an unusual number of white corpuscles, which give a pale or greenish sallow appearance to the skin, hence the name, green sickness. The bowels become constipated, sometimes paralyzed; enormous quantities of gas form, causing rumblings in the stomach and intestines, and passing by the rectum, adding to the general discomfort of the individual.

Chlorosis does not run a limited course, but may exist for an indefinite period of time, unless properly treated.

The patient should have plenty of exercise in the open air, taking pains to stay out of doors the greater portion of the day. If she attends school it will be well to keep her out, and a short trip to the country, mountains or seashore will greatly aid in the general treatment. Hot foot baths, by aiding the circulation, tend to benefit a person suffering from this trouble. Homesickness is a very common cause of green sickness, and a short visit



home will often act like magic. Uterine displacements should be corrected, as they are common causes.

**Treatment By Drugs** consists in administering such remedies as will build up the nervous system. Strychnine and iron combined in the form of an elixir of gentian, or iron and gentian, in full doses of one or two teaspoonfuls, given just before meals, will give relief. The constipation can be cured by a fruit diet, or by the aloes pills, one or two taken two or three times daily—the aloes having a special action on the large intestines. It can be given with dandelion, cascaria, or other laxative drugs. Pepsin or tincture of yellow root will best correct indigestion.

### THE SECRET SIN.

Masturbation, self-abuse and self-pollution are names applied to the awful habit of sinning against nature and against God. There are few persons who are not acquainted with it, and we wish to warn them against the awful consequences of continuing the filthy practice, more than to describe it.

It outrages nature more than any or all of the other forms of sexual sins which man perpetrates, and inflicts consequences most terrible. It is the sin of all sins, and vice of all vices. It is a cause of more sexual dilapidation and disease than all the other sins put together, except syphilis.

Its terrible and fatal ravages are upon both body and mind and those who commit it place themselves upon a level far below the meanest of brutes.

It saps your vitality, poisons your body, destroys your rosy cheeks, breaks down your nerves, impairs your digestion and paralyzes the whole system. No words can tell the terrible consequences. It corrupts your morals, creates feelings and thoughts the vilest the mind can conceive of. Young ladies are dying by thousands and tens of thousands of what is supposed to be consumption, female complaints, spinal or nervous affections, general debility, insanity, or other ailments innumerable, all caused solely by the practice.

**The Effects upon the Mind and Brain** is terrible. The loss of this blood is a complete loss of fifty per cent. of the vital force, and one drachm of the vital fluid is equal in strength to about forty of pure blood. There are some few persons who can stand even this great drain, but others more delicate in organism soon



exhaust their energies and to these such practice is gross suicide. They have little enough of mental force to spare. But this, the greatest possible drain, soon renders them vital bankrupts. Even those who indulge in this secret practice temporarily suffer from such diseases as hysteria, melancholia, hypochondria, and when persisted in, will surely result in dementia. The diseases of the brain or mind are often the first hint to parents that there is anything wrong with their children. Dullness of the mind, stupid, sleepy, dreamy, shamefaced and backward feelings are often the result of these practices. Then on account of this great drain upon the nervous forces, the brain and nerves become benumbed and later paralyzed. But intense excitement is the more usual effect. It renders these victims morbid from the top of the head to the tip of their toes; confused, worried, unhinged, lost, barely conscious of what they do, heedless, or wild with excitement and upon the slightest noise they tremble all over, no self-respect, no great mental work can be accomplished, inflammation of any part or organ causes weakness and weakness invites diseases and moral depravity.

**The Muscles** become flaccid, flabby and feeble and on account of the enfeebled condition of the nerves, there is weakness and trembling, the eyes appear languid and expressionless, with large, dark circles under them. The skin becomes blotched and full of pimples, the countenance is vacant and, on account of the inability of the stomach to digest food, appetite ceases or becomes perverted; as a result nutrition fails. This adds to the already inflamed condition of the mind, and there are generated fears, tremors and terrors until the poor victim drags out a miserable existence. They soon become a total wreck; superannuated before they reach the age of puberty, with the mind often debilitated even to idiotism and their worthless bodies soon tumble into the grave, the result of willful self-murder and held to answer before the great Judge for a sin almost if not unpardonable.

**Symptoms.**—Parents should look well for any signs of this dreadful practice among their children. They should be able to detect the symptoms in their own as well as others and warn them against its awful results; and whenever a boy or girl becomes mawkish, shamed, repellant in looks with pimples upon the forehead and cheeks, pallid, bloodless complexion, half-ghastly eyes with red veins around the edge of the lids, black and blue semi-



circles under the eyes, a haggard and worn-out look, appearing as if almost dead for loss of sleep, a half-wild and vacant stare, half-foolish, half-lascivious smile, with indecision of manner, forgetfulness, loss of memory and desiring to be alone and not caring for the company of the opposite sex. They have pains in the back from the inflamed sexual organs. They often have involuntary loss of seminal fluid, which passes away in the urine, causing smarting and burning during its passage. It is the duty of all mothers and fathers to warn their children against this horrible practice. Knowledge is a sure preventative; then teach them the dreadful consequences. Show them the results and what can be expected if they persist in it. Compel them to abstain totally and forever, as every single indulgence weakens and excites them to others. If you value the future of your child, do not keep them in ignorance of this sin. They must know and when they are properly informed, all danger will cease.

## LOVE.

Love, what is it? It is a condition of the mind, a feeling, yearning, attachment or fondness, excited by something beautiful, proceeding from the mind and not a bodily organ. It is an expression of the sexual state, and the essence of the human spirit; a divine gift, and the rudimental element of the human soul. Love originates and has its center in the apex of all the mental organs.

The simplest movements that are made require for their performance the action of several muscles, and if it was not for the exciting and controlling power of the nervous system, instead of harmony, would result the utmost confusion. There are other human beings with whom we are constantly brought in relation, and this relationship is accomplished through the special senses, all tending to prove that love originates in the apex of all the mental organs.

As the eyes see or the ears hear the different masculine qualities, and as love is the simple yearning of one sex for the other, it hears or sees that in the opposite sex only that which itself so much needs. Both sexes in laughing, talking or walking, proclaim their sexual states.

The nerve of the eye (optic nerve) terminates near the or-



gans of love, and they therefore correctly report all of its states and conditions. The nerve of hearing terminates near the same place, therefore laughing and talking express these conditions. The desire to love and be loved is innate, and forms as much a part of our being as a bone or reason. Every man or woman feels influences of its emotion sooner or later, and obedience to its intuitions insure us the richest blessings of life. It increases benevolence and opens the heart to the want of its object and that of suffering humanity. It heightens spirituality, strengthens faith and weakens hope. It quickens the perception, redoubles the memory, and intensifies the sensibilities. The heart demands and must have an object upon which to lavish the largeness of its affection. (If its laws are violated, nature seeks revenge in the utter depression or prostration of the vital energies. To love is a duty, and should engage our noblest powers.)

Love is universal and necessary throughout all that propagates. Without it, life never would be transmitted, just as we should never eat without appetite. The desire to love and be loved, and unite with the opposite sex in nature's creations, constitutes its expression and the method of its action. The ancients called this desire, passion.

Be this love, passion, amateness, gender, sexuality, or what not, it is simply the crowning passion of the human mind. The natural function of male and female, elements of mutual attraction, and is the love, passion, marriage, or whatever appertains to either sex separately, or both in their inner relations. It is nature's way of bringing the sexes together and aiding them to participate in that intercourse of the sexes, which nature has intended as the initiator of all the forms of life throughout creation.

**Love Adapts Itself to the One It Seeks to Win.**—To love and awaken love in the object of our affection is a gift, a talent and the basis of all conjugal happiness. Upon it rests the entire structure of wedlock. It is the trunk from which all the branches grow, and like the fruit upon the tree, upon them depend all virtue and enjoyment.

Then what to do to prevent dismissal, to guarantee acceptance, to make the very best impression, and touch this idol's heart, and how shall we court just right, is what all should know and must learn. In order to do this, you should cultivate your love and cultivate those qualities you would awaken. By exper-



ienicing these traits, you will awaken them in the object of your love. Your success comes from within, and depends upon yourself, not so much as the one courted. You should examine yourself and try him, seek to find those things which pleases him or those things which displease him, and act accordingly.

If he be fond of flowers, satisfy this desire; study his special likes and dislikes in this particular, humor and adapt yourself to them, and being very careful not to prejudice him against you by awakening any faculty in the reverse, for anything which antagonizes all the other faculties proportionately turns love for you into hatred; anything that wounds ambition ruins all the other feelings, to your injury and that which delights it turns into your favor. Study the following chapters and you will find the reason why you love.

Women love courage, force and firmness in man, as they are the natural protectors of females and offspring. Mothers protect children, but fathers protect both. All women despise cowards, while they love heroes and brave soldiers.

Women abominate bashfulness because it is a phase of cowardice; they love to look up to their natural lord and master, but not to be looked up to; they hate fickleness, but love stability, because their children inherit rigidity, backbone and decision, perseverance from their father or mother's father.

The less firmness a woman possesses, the more she admires firmness in man and loaths fickleness. Destruction, force and firmness are masculine traits and transmitted through fathers and is therefore appreciated and loved by females. She also admires leadership, as men are bolder, stronger, assume command and begins, where women naturally fall in and are his helpmate and ally, which implies dependence. She despises triflers, those who appear humbled or subdued; she likes to see her favorite on his dignity and appear self-respectful and proud, therefore conceit is a masculine trait and she will pardon it, but never humility. Henpecked husbands are despised by women.

Gallantry is a powerful masculine impulse and the strongest of female desires and passions are to receive attention from men. Generosity is loved by women, so men must make real genuine sacrifices of comforts, money and bestowing upon the object of his affection the very best of everything, not sparingly or grudgingly, but gladly, as if it were a great privilege. Men give to women their love not promiscuously; they are as stingy toward



those females they dislike as they are generous to those whom they love.

Love is the forerunner of children and prompts that gallantry and generosity that is so much needed for them and their mother for their support, and for this reason women hate stinginess in men, while the attentions and presents delight and please them because they indicate and proclaim love, therefore their love-inspiring heart assists in manifesting lovable qualities, and all who wish to successfully go "a-courting" should go with well-filled pocket-books.

Nothing melts a woman's heart like liberality, nothing hardens it like meanness, so men should be "flush, launch out" liberally for candies, ice creams, rides and presents. Being liberal in courtship proclaims later maternity, while love-making implies children in prospect.

The woman who will receive presents and attentions from a man means, although she does not say it in so many words, that she will pay him back in love and then in bearing him children. The husband should be more liberal to his wife than to his sweetheart, as they are actually instead of prospectively bearing. The stingy niggardly husband is no man, or even a brute, for the males of all animals hunt for the female.

Man originates life and all things human, because his mind is stronger, more prominent and begets the life principle. The mind is the measure of the man, and mentality his great attribute.

From the mind originates every single feeling, desire, action, instinct, capacity and function of man; every act whether breathing, eating or moving, spring from this mind, and mental power constitutes life. The power to hate, love, remember, talk, sing and to think, originate in the mind of the male and inhere in that life-chit he furnishes. The microscope proves that the spermatozoa, or life-germ, has a mouth, a motive apparatus, and thus having a mouth, proves that whatever else goes with it, it has muscles for we can see it move, therefore it has all the rudiments of the other organs of the future being. It also has the intelligence to move them. Thus the spermatozoa is a distinct body from the first and is simply received by the yolk sac or ovary or food sac, and is simply nourished until it becomes too large to longer grow within the womb, and is then expelled and nourished from the breast. Then the new being is simply a fungus growth, attaching



itself to its mother to receive nourishment until such a time as it is strong and large enough to nourish and take care of itself.

Man is the originator and woman the helper. Man creates the life germs, and woman receives, feeds and rears them, and helps man complete whatever else he begins, while she herself begins nothing. Women admire intellectuality, strength of understanding and commanding talents. Show her that you know something, that you can think and act, and are able to give her seed thoughts and original ideas ; show her that you have talents of mind, and soon you will melt her heart into yours. Those who think to enamour women mainly by clean linen, nicely combed hair, perfumery and fashionable clothes, make a great mistake. Prominent, outlandish features signify a powerful organism. Men noted for impressing, captivating and desperately enamouring women are usually homely. Soft men are despised by women, because they make their children flats. Men who seek to win women's affections or love should never show any weak or soft spots. Never make any foolish speeches to or before your lady-love, for fear that it will turn her admiration to disgust. All women must think a man smart before they can love him ; therefore, read books and inform yourself ; show her and others that you have ideas worth considering, and you will win your point.

**Females Love Vigorous, Well-Sexed and Passionate Men,** for unless life is begun with energy, it must remain weakly and inert throughout its span. To be strong it must be begotten with immense energy, sufficient to impress, impregnate, and to set apart all the physical and mental characteristics of its father. Platonic love creates sentiment and should abound in the mother. Physical love belongs to the male, and must be powerful in the father, that the offspring may be vigorous.

A weak mother will often bear strong children by a virile father. The paternal endowments are impressed in a short time at the creative altar, while all the maternal influences are prolonged through the nine months. Hence the strength of males. They seem to be brim-full and running over with passion ; and women love passion because it impregnates them with power, and endows their offspring with vigor.

**What Men Love in Women.**—That woman is the most handsome who possesses most child-bearing capacity. A beautiful and



strongly sexed girl in calico looks a thousand fold better than a poorly sexed plain one in the richest toilet. Man loves in woman that which he himself cannot supply. Her beauty consists in being able to enamour man. It provokes desire in him and kindles his passion ; urges him to sexual intercourse, increases his pleasure, and promotes impregnation and fine children.

Men court, compliment, wait on, and fondle around a handsome woman, but neglect one of commoner looks, because the personal beauty inspires physical love. Nature makes those handsomest who can have the best children ; they are naturally selected first, and this beauty inspires the passion in man. All masculine experience proves that female charms awaken the male desire and promotes intercourse ; therefore, anything that contributes to maternity will awaken in man love. Women were created females solely to become mothers, wifedom being only the means to bring about this end. Everything feminine centers solely in the bearing, and this is the foundation of man's love. Maternal excellencies only attract, captivate, magnetize him with love, and this love is more or less great in proportion to their child-bearing capacity.

### THE FEMALE TYPE OF BODY.

As woman's greatest mission is to feed the life germ, and nurture and protect it, nature provides by putting in her, food, dissolving, assorting, carrying and storing it away, where in times of need it may be called upon to nourish and feed the germ. She must have a surplus of vital force, more than she herself can use in executing her own life desires. She must breathe, digest and furnish heat for two, three, sometimes four or five, and no weakly, poor-bodied woman could supply this. Vitality is of more use than muscles ; and, as the father furnishes these, she must have extra digestion, and this storing away of tissue gives her a round, plump figure, with an overflow of animal life. And she must manufacture that ovarium pabulum, to first start the life germ to growth and then feed it while it presides in the uterine tabernacle, and after birth, furnish the nourishment until it grows teeth and can feed itself ; this requires a good body, vigorous health, and digestive organs in good working order.

**Woman's greatest beautifier is a large pelvis.** Large organs are necessary to powerful functions, and is a measure of power.



The pelvis is intended by nature to furnish and supply a comfortable and safe home while the life germ is becoming large enough to sustain an independent life.

A narrow, small pelvis would support, carry and allow passage to only a very small poor child, for this reason a woman's narrow pelvis is weakness sexually, and has an inferior and insignificant appearance, is not attracted, neither will she attract the males.

**The Mons Veneris**, next to the pelvis, is admired by men. It is the mountain of love, and is man's great passion inspirer, because it indicates maternal capacity for receiving, carrying and delivering children.

It is a sign of parturition and furnishes a large passage way, while the retiring pubis renders it necessarily small ; and considering the infant's size, will render labor severe. There is nothing about the woman's person so enticing to man, and she who possesses it may be justly proud.

**Ovarian Fullness.**—The ovaries are located in the female groins, and as their sole office is to supply eggs or food germ. the larger this part, the more feminine she will be, as the mother is the commissary and must furnish food for the life ; from the beginning, it is therefore necessary that they be represented as fully and largely developed, and when they are large and full of vigor, they will fill out the lower and lateral parts of the body, in front of and in the middle third of her hips, hence the fullness of the groins, and flatness from hip to hip in well sexed women.

**The Height, Weight, Size and Color of Women** tell us much more about them than we at first discern. All extremes are unfavorable. Rather short females are very warm and loving, but usually poorly sexed, and extra tall, spindling women are also poor females, but if well proportioned and more tall than large, are very nearly premium women. The length of chest, body and pelvis is very important, as they give depth to the lungs and width to the pelvis, and renders carriage and delivery more easy. Heavy, fleshy, tall and large masculine looking women are frequently poor bearers and not the best of wives, and are very often barren. They are coarser grained, stronger, and lack delicacy and the spiritual.

A long and large neck is most desirable. Largeness or spreading at the base, indicates the depth of lungs and chest.



Blondes are soft, tender, sweet and pliable, good and loving, yet not very desirable, while brunettes have a greater amount of character for good or evil, influence and magnetize powerfully.

**Fatness, Plumpness, Embonpoint**, when not to excess, beautifies. Women, to be fair, should be moderately fat. A full plump figure, all the hollows leveled up, and the projections smoothed off, beautifies, or it signifies surplus material for maternity. Some superior women are sometimes made lean, lank and scrawny, and look badly, because the naturally rich blood which should be stored up for maternity and nursing, is withdrawn by menstruation, while inferior menstruation will leave inferior women too obese, causing them to look dull, clogged and heavy, and uncomfortably full. Women who are spare from maternity, are fresh and healthy looking, while women who are deficient in vitality, have a cadaverous, hungry, tired, spent, exhausted, used up and repellant look.

#### FULL BREASTS AS A FEMALE BEAUTIFIER.

Men, throughout all climes and ages, have been admirers of large, luscious bosoms, sometimes amounting to a real passion. Women practically acknowledge this, by dressing them up so invitingly when they are deficient, but exhibits them coyly in full dress when they are well developed. As a female ornament, nothing else equals them, and those who have them, other things being equal, are much sooner selected and more marriageable than those who lack them.

Women could safely forego every other toilet ornament for this one ; it sets off its possessor more than diamonds. A flat chest disappoints men, and they turn from it as if it lacked something. Women who have them large, plump and naturally elevated, are very beautiful to behold. They could dress in calico, as nature has already ornamented them, beyond all power of art. A good feminine face, with a poor bust, lacks an indispensable accompaniment. Men love luscious bosoms, because they promote maternity, by indicating child-bearing capacity, as well as being able to supply the nourishment for the infant.

Small breasts often furnish more nutrition than over-grown ones, while very large bosoms indicate maternal deficiency.

Those who have small breasts, should spare no means to have them developed.



## THE QUALITIES THAT MEN ADMIRE.

**Men Admire Large Female Thighs and Small Feet**, because large thighs accompany a large pelvis. It would be impossible, without deformity, to merge from large hips into small thighs. Men admire large hips and thighs better than small ones, because they are an indication of maternal capacity.

**Small Ankles and Feet** also are attractive to men, as they signify light-footed motion so natural to females, which the large thigh and calves aid in contributing. Small feet, large thighs implies, and consummates the tapering below the hips, which belong to the female figure. Large ankles and feet indicates coarseness and strength, and is masculine.

The Chinese early recognized this fact, and bandaged the girl children's feet soon after birth, in order to dwarf them and insure a small foot. Chinese women with extra small feet, bring very high prices as wives. American women wear tight shoes, in order to make them appear small.

**Female Arms are Attractive to Men.**—They help to hold and nurse children ; they indicate good muscle and maternal quality. Fine arms are more ornamental than fine thighs, because they are more observed. All women exhibit them by wearing evening attire, and she who has handsome ones, may display them as well as a fine bust, and be proud of them, therefore, girls should cultivate arm muscle, and work with them, and exhibit them.

Men love spiritual, exquisite and emotional women. A good body is good, because it aids to support a superior spirit, and men love a fine female body much, but mind, much more.

As the mind rules everything, it also develops in women, good or poor bodies, according to the strength of the mind. Females are finer, softer and more susceptible; they have a finer grained organism, texture, skin and hair, are smoother, softer and more sensitive than males; they are also more nervous, and, for this reason, women love gossip, are novel readers, and delight in listening to sensational stories, and they are more eloquent. Plain men care little for their own personal appearance, but delight to see neat, attractive, well-dressed women, and will spend uncounted sums to satisfy their desires. Woman is full of soul, which finds expression in music, dancing, and all female accomplishments.



Women love ornament and the exquisite, while men are practical. The love of flowers is another outgrowth, and should be cultivated, so as to promote refinement and break up the monotony.

Woman's strongest instinct is the love of young. Love is an all-powerful female sentiment, and they worship ever at the shrine of their dear babies—far more than their husbands.

It is only occasionally woman will forsake her children for a lover. A woman will be a slave for her child, and there is no slave that will toil more slavishly for it than she. Her self-interest will be forgotten; she will lose sleep and starve herself to feed it. All are indebted to mother, and none can develop kindness, intellect, pride, and inspire energy more than she. Children can not conceive the pain they often give their mothers. Maternal love exceeds all other love; love of money and other loves are as noonday to twilight.

Mothers will sacrifice all for their children. To make a mother angry, abuse her child, and you have a tigress.

Self-love is the main-spring of all human feeling, and upon this maternal love is based. Their children are precisely like themselves, and because like father and like self, she must love her child.

Love, friendship and companionship are strong qualities for women to possess.

Man loves a woman who will befriend him, dote and affiliate with him. She should disclose to him her whole heart, become one with him, make common cause, work with, and, for their mutual good, she should completely identify herself with him, and make him a boon companion in everything. They should co-operate in the production and rearing of their young, and this requires mutuality and all else of which a pure intimate friendship is the chief cause. Friendship should be stronger on her part, because she requires to cling to him more than he to her. That wife is not worth much to man who would not assimilate and identify herself with him and to his interests. She should cordially receive him into the innermost recesses of her whole being, and nestle herself into his affections, and he into hers. For this reason it is extremely difficult to shake off a woman whose affections have once been established and fastened themselves upon a man.

**Piety and Religion** is greatly admired in women, and they



have always been noted for their religious devotions. The vestal virgins were selected to keep the holy fires perpetually burning. Even among the cliff-dwellers of to-day, the last of the race that at one time peopled this continent, virgins are selected for this purpose. They were first at the sepulcher and last at the cross. Three-fifths of the modern church members are females, and prayer-meetings are almost entirely composed of women, and if it were not for women religious ordinances would be but poorly sustained. They extend religion by becoming missionaries, and during public calamities they excel men in self-sacrificing devotion for the common good. As nurses at the sick bed they excel; they have that feeling of holy awe, and a spirit of prophesy they foresee and forewarn against prospective dangers and advise as to that course which is best to pursue.

Women are apt to jump at conclusions, while men arrive at them through reason ; they are full of spirituality, and their chief and distinctive office, is to bestow, and for this reason, immoral and irreligious men prefer religious, moral and church-loving wives.

**Perception and Eloquence of Speech is Woman's Accomplishment.**—Men are reflective and women perceptive. Expression is large in women, and this renders them natural and elegant talkers. A superior accomplishment, and one which will one day be appreciated ; all natural orators derive their eloquence from their mothers more than their fathers. It is the general opinion that talent descends mostly from mothers, which is especially so as to literary gifts, but a gifted man generally descends from a sire who possesses great strength and power of intellect, and is noted for his common sense.

**Female Specialties.**—Woman's reputation is her recommendation, her character is her all ; she must be above suspicion ; she must not steal, cheat, gamble, quarrel, carouse, and must be moral and virtuous in all other respects, Love of show, display and style, pride of character and gentility lead to aristocracy, and these are outgrowths of ambition, and cause strife for social position, and in women has taken the place of war ; having splendid parties, dresses and furniture, is now all the rage. She is the most genteel lady who can wear the most fashionable wearing apparel, and dress the most stylishly. She loves display, she likes sham, and wants to appear to be, and endeavors to reach a high social



position. She must not only be smart, but must be good, and dress superbly.

Women, more than men, feel social position, and show exclusiveness much more than men. She will put on airs, wear gold trinkets, and will be proud of them, while men, no matter how rich, will dress but plainly. Females have more dignity and are much more particular about their characters and conduct than men. They must hold social position and must not deviate a hair's breadth from what is considered genteel and proper.

**Caution and Gratitude.**—As caution is a means to save the young, women have this trait well developed. The rustling of a leaf, jolting of a carriage, or shying of a horse frightens them. If their darlings fall sick, they call a doctor. They do this and a dozen other things in half frenzy ; they often kill their children by the very means taken to save them. They are always more scared than hurt ; in sickness, where it requires coolness and nerve, it is best that they leave their child's room at once, until they can become more quiet, as nothing is so fatal as terrified attendants.

Her love for her children compels her to guard and protect them against all possible dangers. Because women are more dependent, they are more naturally grateful. Gratitude beautifies her spirit and sets off her character more, even, than music.

**Tact and Secrecy.**—Women naturally show a great amount of secrecy and tact. They are cunning, deceptive, full of hypocrisy and intrigue. They are pronounced natural falsifiers. This is natural, because she must protect her young by strategem, policy, tact and concealment, while man protects his family and self by bold manly attack and defense. He supplies the force, and she the art and shrewdness, and they both thereby accomplish much more than if either alone possess both.

Men love coy discreet, proper and reserved women much more than blunt and abrupt women ; they hate subterfuges ; this explains practical falsehoods in women's toilet, such as false curls, false hair, false forms and bosoms, painting cheeks and penciling eye-brows. They ever practice downright deception in pretering to be glad to see those they hate, asking them to call often, when they really desire never to see them again, of which they are more proud than ashamed. A perfect woman must unite all these mental and physical attributes. Perfect maternity is the



touch-stone of perfect woman, and whatever impairs it, impairs them. For bearing, they were primarily created, and exquisiteness and strength united, cause female perfection. Nature desires mentality in predominance ; strong animal passions, with robust bodies, to make children more animal than sentimental.

Strong minds and bodies constitute perfect children, and until modern women become more robust, modern children must be fewer and poorer. Female vigor is the want of the age, because we must have more robust children. To bear well, a woman must be well balanced in all other functions, as only well-balanced women bear most and best children. American women should cultivate robustness for they are too nervous. Excellent muscles, digestion and circulation promote refinement and a hearty sexual passion included. A woman to be exquisite, must be passionate; therefore, in order to create and augment exquisiteness in her, and her darlings, she should cultivate robustness and exquisiteness.



## COURTSHIP.

In order to court rightly one must know what is right, and have knowledge of first principles, in order to prevent a failure and miscarriage of affections. None are too old to learn and none should make an attempt to court until they know how. Whoever is courting wrong will be told so by the still, small voice within. To love rightly is to be crowned by nature's highest pleasures known to man, and while nothing will render us more happy than a right love, a wrong love will render us most miserable. It is the highest of human luxury.

A love once initiated can only be broken up by some very serious cause, therefore it is important that we make a right selection and continue our courtship properly. By far the larger part of the discords in married life result from wrong selection and a bad courtship.

Almost all who marry love with inexpressible tenderness at first and whoever begins to love should continue to love more and more every day and every year.

Teach men and women how to make love and there will never be a case of infidelity or discord, and the affections of both will redouble perpetually with age.

If a man can once begin to get woman's affections, he can infatuate her more and more by simply making love rightly, and the woman who once starts a man's love can do with him or get from him anything she wishes. Teach the right love-making to your children and their virtue will take care of itself.

In order to start courtship just right, you should have an exalted estimation of each other. Courtship, the mating of kindred souls, is one of the most delightful and sweetest periods of life; the most common-place scenes are invested with romantic interest; it is a time that is dreamed away in endless enjoyment. Courtship is second to no other era of life. A young man and woman are attracted to each other; the point of attraction may be trifling and insignificant; neither can tell exactly in what way the other attracts. The attraction leads to association; association ripens into friendship; friendship into love, and love to fruition



in marriage. Courtship is the time in which we should gain more intimate knowledge of the character, habits, disposition and temperament of an intended to decide whether they are adapted to us, or we to them.

Love is blind, but courtship is not love, and therefore not blind ; it is simply the beginning and cultivation of love.

A man may be bewitched by a roguish eye ; attracted by a dainty habit ; charmed by a graceful form and carriage, and delighted by a witty conversation, but he can not respect and love a handsome dress, a perfect movement, and a ready tongue, but what he loves must be preceded by profound respect.

Courtship is then a time of wooing and cooing, but more especially a time of careful and deep study. The lover's future depends upon the thoroughness and carefulness of this study. Courtship need not necessarily lead to marriage, and marriage does not imply happiness ; on the contrary, it has frequently proven to be the deepest sorrow. It is then a mere matter of judgment, whether marriage shall be contracted or not. Therefore, the courtship should be conducted upon a rational basis, so that the character of each will be fully known before marriage ; she should study her lover and see if he be a suitable companion—one that she can depend and rely upon for life, and not simply lead the wooing into a declaration of love and a proposition of marriage, unless she intends to fulfil her part toward the lover. Many girls make the mistake of attempting to appear better than they really are. She should never appear as possessing no blemishes, flaws or defects. If she should succeed in deceiving her lover into marriage, it will be but a short time until this delusion will pass away, and the awakening will be dreadful, but had the courtship been conducted properly and honestly, what a blessing you would have attained.

Courtship is such an important matter, that it should be well studied, and never allowed to commence too early in life. Do not let your girls think of this all important subject too soon. It is unnecessary for a miss of sixteen or seventeen to receive special attention. The period of courtship is limited to a certain number of years, and the woman will have her years of match-making, no matter if she begin at sixteen or twenty ; but do not court the subject ; better drive it away than draw it near, until you are able to decide what is best for you. Be very careful of hasty entanglement ; well weigh this matter before receiving particular atten-



tion ; guard well your affection, until your judgment and reason commands their bestowal, and even then do not haste ; do not fall into the snare of an imaginary life, but when you have made up your mind, and your judgment tells you that you have made the proper choice, be not slow or backward in showing your affection to your lover. Pursue your case until you terminate in that marriage, which is to be hoped will prove to you a paradise.

Courtship should not be begun earlier than twenty, and it will be well to defer marriage until twenty-four or twenty-five. She should remember that marriage means the rearing and bearing of children, therefore she should be fully matured, so that her children will be strong and healthy. Always remember that love and marriage is for mature women, and not for girls.

After the engagement they should see each other in their best attire, and each should appear to the other in a most captivating mood. Though engaged, and virtually married, you are yet comparative strangers, and should now begin to make love. This selection is like procuring material for building ; each should think what they require in respect to marriage relations ; what they would wish to have done ; outline the different positions you would assume and bear to each other ; discuss your future home, whether you want to live with your parents or by yourselves ; whether you will rent or build, and if build, under what pattern and at what expense. It is very important that the intended wife should have a great deal to say concerning the prospective home, and especially about the internal arrangement, the management of the house, the rooms and the furniture, and all the little points respecting which wives are consulted quite too little, but should be careful not to advise too much. Each should have their say and be allowed to do this or that, and they should come to some mutual understanding concerning a thousand minor matters of which it will be well to settle in the beginning.

Any little disagreements should be adjusted early. If it be impossible to agree, agree to disagree ; settle all these matters, and the spirit in which they are settled will be important.

Neither should insist upon having their own way ; it will be better to concede than to command ; each should be anxious to oblige the other, and the one who yields and obliges the other the most is the most lovable. See each other often.

Love will not be neglected. Visit each other once every



week, oftener if it is mutually agreeable. There is nothing so fatal to love as neglect.

Remember that love is a sentiment and not a passion, and whether you love much or little, endeavor to keep your affections on a pure, high base, and when you meet it is important that you intermingle your love with the other enjoyments; go together to parties, operas and picnics, take sleigh rides and buggy rides, and often meet under like pleasant circumstances. Neither can render themselves too lovely in the other's company.

### FATAL ERRORS OF COURTSHIP.

As loving is marrying, the custom of courting just to have a good time, cannot be too emphatically condemned.

By the majority of people, flirtation is looked upon as harmless; some think it is useful and think such associations valuable to a young person.

A young lady who has become infatuated with the passion of flirting, courting the society of young men for fun, is educating herself in a school which will totally unfit her for domestic joy, peace and happiness.

The greatest share of flirtation lies at the door of the female, but the most detestable creature on earth is a male flirt, and as a usual thing his character is much darker than that of his companion. In nine cases out of ten he is a rake; his only object is to gratify a mean propensity. He is skilled in the arts of fascination and in trick.

Society is full of these lecherous villains, who insinuate themselves into the society of the most respectable families. They are on hand at social gatherings, ball-rooms, theaters and church, when it will forward their infamous plans. These are the sharks of society. A male flirt is a monster, and they often seize, in their voracious mouths, the fairest and brightest ornaments of a community. Every woman ought to spurn them as they would a social leper.

Yet a woman flirt is almost as bad. After coquettish ways, you have purposely invited and allowed a man to love and caress you and express your love for him, and now watch, with eagle vision and tiger-like ferocity, for an opportunity to do him the greatest wrong and the most vital damage. You will perpetrate a crime at his dismissal. Do not be so cruel; do not inflict so



great a wrong upon a young man. He has paid you the greatest compliment of life by loving you; you should ever manifest at least a tender and exalted regard for him.

Never allow a young man to keep calling just enough to discourage other suitors, for in time your sexual bloom is sure to wane and then he will desert you. Every woman should protect herself by saying, in word or deed, "When you make a definite proposal, I will gladly confer with you, till then I beg to be excused," and this will bring a proposal, but she who lets her mating period pass in such waiting, deserves to atone for it by celibacy or unfortunate marriage. Keep your suitors waiting no longer than is necessary to make the required inquiry.

**Testing Each Other's Love by Love Spats** is sure to wound each other's feelings. If you wish to know whether he loves you, it will be better to find out, as you would anything else, by asking the only one who knows.

Never allow another to court unless you intend it, because it justly aggravates his affection and cites him to anger and wounds his pride, and thus embitters both his love and his life, and this will engender hatred.

**Love Spats Are Hate Spats.**—Though experienced by most lovers, yet none realize how fatal they are to subsequent affection. Curtain lectures are but love spats "all on one side," and the one who indulges in them will be sure to be a wife-scolding husband.

**Every-Day Clothes and Faults.**—Each must know the other, or else how can they love? Truth will out, and especially in marriage; knowing each other's errors repels and engenders mutual dislikes. In order to decide whether they love each other or not, they must first obtain a correct knowledge of the other's tastes, likes, peculiarities, faults and characteristics. Frankness, therefore, becomes indispensable to the future love; nature loves truth, but abhors falsehood.

After marriage they will be compelled to know each other's faults. If they know them beforehand, and then deliberately marry, they must expect to tolerate them always. Frankness, instead of breaking off matches, will only promote them, because both are in an over-looking mood, yet if it break off the match, it should. If his knowing your faults beforehand would have turned his love, his knowing it afterwards will surely kill it, and once marriage takes place, you are prevented from placing it else-



where. Do not make him think, by millinery and dry goods, that he is about to marry a splendid form, when, after marriage, he will have discovered that he has married a splendid sham.

The fact is, lies never pay; they always punish the liar, and practical liars are the worst, because they are the wickedest. "Honesty is policy," and truth will triumph. "Thou shalt not lie," applies to marriage more imperiously than to any other relation. For this reason, never conceal your age; make a clean breast of each other's traits, whether good, bad or indifferent.

Do not be afraid to let your sweetheart see you in your every-day dress; he may be afraid to propose marriage for fear that he can not support you. If he is honest in his intentions, he will want you for a comfort and a companion; if he wanted a doll, he would buy one. He sees you often enough in your Sunday clothing; he would like to see you in your every-day clothes, and about your daily avocations, as you will be likely to appear after marriage.

**Presents** are objectionable before engagements; they have a tendency to awaken love, and no love should be allowed until after the engagement, and you will not feel as free to decline as if you were under no obligations. Wait until you have acquired the right to receive them.

**Night Courtship.**—Many men go to church in the night-time to see and be seen by the girls, to wait on and see the girl home. The girls go there less to worship than to see and be seen and be waited on home, and some to be stayed with. This night courting is most objectionable, and courting all night, outrageous. Everything has its season; night is demanded for sleep, and young people must not interfere. It will injure your health, as is shown the next day, if badly stayed with.

All evil deeds, like evil beasts, seek the darkness and hate the light because the deeds are evil. Then why thrust courtship into night? Bring it to the light, as good deeds may be made manifest. True lovers are the last to hide their love under a bushel. There is nothing so beautiful as true love-making; then why not court before the old folks? Whatever is not proper to be said or done before them, should not be said or done at all.

Parents, be careful how you allow your susceptible daughter to sit up alone with a beau at night, and especially one who is courting just for fun. Passionate youth should not be thus



tempted. Mothers, how can you expose your daughters? Their reputation is their all!

**Liberties during Courtship Kill Love.**—You little realize how many lovers you lose by allowing liberties, no matter how innocent they are of themselves.

Man is the most jealous of animals, although he has no real claims upon you until engaged, but reasoning as if he had, he thinks you will concede to others, what you concede to him.

If you will let me kiss and caress you, of course you will let others, but I will keep on calling just to get the kisses and caresses, but I will never marry a girl so free and familiar. Remember, intimacy belongs only to marriage, and you will ignore these promptings at the peril of hopelessly alienating your lover, and this you can not at all afford to do.

These men are too precious to be thrown away, and their affections to you are your choicest possessions in life.

Right is right, and prospers; wrong is wrong, and curses. Love is marriage, and all sexual freedoms are still more marriage and unjustifiable, except between those already engaged. A girl's only winning card, is neither to reciprocate nor allow any approaches of the manifestations of love.

Men love to tell each other of their amours, but always say more than is true, and more by implication than by words. Give them no shadow of an excuse. The way to win their respect, and to extort a proposal and keep your own conscience clear, is to put and keep yourself upon your own lady-like deportment. Be a true, virtuous woman, if you would command and retain man's respect, and any departure will cost you more than their worth, or you can afford. No girl need take offense without cause, and decline in a tornado of wrath. This angers, but does not humiliate, and spoils the stunning effect more than gentle reproach; fierce wrath is the least effective weapon; do not be too cold, as coldness will cause an offense, but take an independent stand; let men see, that however intelligent, literary, moral, religious or domestic you may be, and however freely you may express all your other feelings, yet, be careful, that not one expression of passion of your love can be extorted from you until your choice is made and the preliminary is settled, and you should hold your love as the choicest treasure of your being. This will exalt you in their estimation above other charms or excellencies, as it strikes











the highest cord. All who are worth having—and you want no others—will go and sell all, or do anything to obtain such a woman.

### MARRIED IN HASTE TO REPENT AT LEISURE.

As has already been said, love begins with attraction, leads to interest, expands into respect, deepens into tenderness, and rushes into passionate desire; then there are cases that have been irresistibly drawn to each other at the first meeting.

Persons who have been denied all associations of the other sex until this element has been almost starved, might possibly conceive a pure mutual union at first sight. Though suddenness is no objection to a pure love, based on mental excellencies and mutual fitness, that love is best that takes time to establish. Chance marriages are objectionable.

### INFLUENCE OF THE WIFE ON THE HUSBAND.

The power women exert over men to encourage or discourage is wonderful.

If her comportment sheds honor on him, and builds him up in the estimation of others, he will be honored beyond his deserts but should she continually do and say trifling things, which give rise to petty jokes or scandal, he will row against wind and tide. A great deal depends upon the wife continually building up; she should praise him, thereby increase his own estimation; she should not be constantly discouraging him, thereby causing self-distrust, yet she should use affection and judicious criticism.

If a comfortable home, a happy fireside with loving children, be your aim, it will be best for you to give up fashion, parties and amusements as they detract from domestic enjoyments. If you are cross-grained yourself you will sour his temper, and that of your children, and render home unhappy. An amiable wife will make a hovel a paradise, and a comfortable domicile, a heaven indeed—therefore, self-improvement is a paramount duty and glory.

Many young men rising gradually but steadily in public estimation, intelligent, worthy, prosperous, and marrying an inferior wife, will sink gradually in position, property and character, until he becomes almost unobserved; at length, fortunately, she dies;



then he marries a superior woman ; she gives him the air of respectability and builds him up little by little, until he becomes prosperous in business, gains confidence and position and office, consequent upon the silent but portentous influences these different wives exert over him. It has been said by one of our late presidents " that he owed his presidential position solely to the influences of his wife." We become like those with whom we associate ; the influence of the wife over the husband is great ; her marriage affects her more than him. If he has high hopes and aspirations, has she not as high ? Are her visions of the future less ecstatic ? Does she build less air castles than he ? Or can he render her more happy or miserable than she him ? She should be far the most affectionate and susceptible to pleasure, especially domestic. As his life, hope and success depend much upon her character, hers depends more upon his ; his pleasures are more diversified than hers ; hers are more concentrated to marriage than his. It is possible for him to pick up fragmentary happiness outside of marriage, but she must find it only there. If love has been a blank he can render life possible by enjoying this, that and other pleasures—politics, business or the club—but she must, when her conjugal cup is filled with gall, sip her bitter drop the rest of her wretched lonely life, and seek sweet grim death for relief. Love is so much to him, but to her it is everything. A good wife is man's great blessing, but a good husband is everything to a woman. Her industry is a great boon to him, but her extravagance is ruinous ; it is in her power to develop or becloud whatever natural instinct he may possess. As she can develop the man she loves, so can he develop her.

### UNCHASTITY ON THE INCREASE.

This is the most licentious age the world has ever known. Generation after generation has added its weight of inherited influence upon offspring until the present climax of evil has been reached. Yet there has been periods in the world's history when lust was even more uncontrolled than now and vice was universal and virtue was unknown. This fact alone is sufficient to account for the great overflow of peoples and nations. The Greeks celebrated the gods Bacchus and Pallus by processions of half-nude girls performing dances, with satyrs of men and the most noted and distinguished women were courtesans. Even the wise



Socrates at the present time would be deemed a libertine. During the reign of the Roman Empire the whole world seemed to be abandoned to lust; even the great Cæsar was called every woman's husband and suffered from a disease which at one time nearly cost him his life. Licentious living not only saps the vitality of the rulers of nations, but in affecting the general morality and health of the people indirectly caused the downfall of these great powers.

**The Causes of this Great Social Evil.**—Among the first causes of licentious living is hereditary descent. All persons who are known to live lives of sin and lust have had sinful and lustful parents. If heredity could not be traced in any other direction, it would be easy to trace it in the transmission of sensual propensities. The daughter of Cæsar Augustus was as sensual as her father, and her daughter was as immoral as herself. David's sons showed evident traces of their father's weakness, as Solomon's and Absalom's incestuous habits easily prove, both being noted polygamists—Solomon having 700 wives and 300 concubines, and his son's son having as many wives as his small kingdom would support. David's ancestors were not known to have reached the degree of lewdness he attained, yet the trait had lain dormant for generations to be manifested in him when the opportunity presented itself. The influence of excesses during pregnancy in producing vicious tendencies in offspring has been spoken of elsewhere in this work.

**The Influences of Early Association of the Sexes** is another great cause of this evil. Some persons allow their children to associate with the opposite sexes as early as the twelfth year and wonder why their children turn out bad. Parents fail to instruct the girls of their natural functions, but boys are allowed to associate with those of older and maturer years who have already been initiated into the mysteries of nature and boys having nothing to lose, are turned loose and nature allowed to hold its sway, until the boys of to-day at the age of fifteen know as much as men of thirty did formerly; then to allow these wise children to associate with and keep company with girls of this tender age could do nothing else but corrupt morals and even cause the loss of chastity. If mothers will keep the girls from associating with the opposite sex until the age of eighteen she need have no fear for the future of her girls.

**Food** stimulants and condiments derange the circulation and



indirectly affect the sexual system, and such food as flesh of different kinds, oysters, eggs, tea, coffee and chocolate have that influence. Pepper, salt, ginger or mustard create irritation and increases the supply of blood, causing a fullness, a general feeling of well being and indirectly stimulates the reproductive organs.

**Exercise** of the mind is as equally important as exercise of the body, and those who are mentally idle are almost certain to experience too strongly the animal propensity, and licentious thoughts are too often indulged, merely for the want of better ones. Too much mental exercise, if attended with care and anxiety, is most destructive to the sexual power, and there is no longer any need of licentiousness in young people, as excessive muscular exercise is certain to subdue any inordinate sexual desire. It matters little how the sexual glands may act in a state of leisure if the body becomes exhausted by active exertion, the seminal glands will be certain to become less active.

The reports of the Massachusetts lunatic asylum conclusively prove that hard labor is a certain means of subduing this propensity to its proper limits under any circumstances; therefore parents will do well to find such employment for their sons and daughters as will keep their minds and bodies in activity. Numbers of persons have been made licentious by lack of bodily and mental activity. To maintain purity, the mind must be occupied. If left without occupation the vacuity is quickly filled with unchaste thoughts and mental occupation is the only safeguard against unchastity.

**Constipation** is one of the most general causes of sexual excitement in the female. In constipation the rectum becomes distended with feces. This effete matter which should have been evacuated is retained in the rectum and becomes a hardened mass. By referring to the plate on the genito-urinary organs, on page 22, it will be seen how this mass can press upon the parts most intimately concerned in the sexual act, causing excessive local excitement, which will often lead to the the most serious results, producing satyriasis, inflammation, etc.

**Irritation of the Bladder** is another enemy to chastity and should receive prompt attention.



## THE SINGLE LIFE.

The single life has much to commend and more to condemn. It has its advantages and its disadvantages. It may be forced upon some by an unpleasant social condition while others choose it from reasons of economy, or from timidity, or as a religious rite, through the mistaken notion that continence means chastity while in reality the most chaste are the married and not the virgins and celibates.

The single life is necessary and compulsory up to the age of puberty, but at this age, the natural condition of life asserts itself and the girl rounds out her person, the bust becomes enlarged, the legs increase in size, the thighs become more rotund and assume the shape common to the female. The pelvis and hips broaden, the ovaries become more strong and the shoulders and neck assume a shape that attracts and is beautiful to the male, the monthlies make their appearance; in short, nature is preparing the girl to become a woman. Gender is manifesting itself and unless one is deformed or has not been perfectly developed in all the physiological organs, she will begin to have a feeling towards the male sex that is not merely friendship, nor like that existing between her and her girl associates. Nature has prepared her for a purpose. She has given her organs for the perpetuation of the species, the same as she has given her a stomach, and has given her an appetite to let her know that something is needed to build up the waste of daily existence. Nature intends that she shall use these organs and unless she satisfies nature's longings, she must suffer. But in satisfying these longings, there are certain rules acknowledged by society which must be observed. Therefore, continence or perfect abstinence from all intercourse must be observed, or she will be compelled to pay the penalty of public opinion. In America and England, public opinion demands that a female be virtuous and observe continence, total abstinence and any violation of these rules will condemn the offender to oblivion. Girls and widows, no matter how rich, handsome and refined, can not attain or retain social position unless virtuous. All women watch each other with the most



jealous eyes, and any deviation from the set rules of society, will be immediately condemned. One false step will ruin all of her prospects for the future, no matter how blameless her life has been in the past, or how bitterly she repents, let her yield over to temptation and her sister in society will no longer pay attention to her. Society demands total abstinence in single women or they are forever ostracised and ignored. Society's natural law is virtue and it must be observed by all.

Women sometimes remain single to keep out of trouble and some are not ashamed to say that they do not intend to worry themselves to death by having children to nourish and to take care of. They also say that bearing children is a dangerous business involving too much risk. But in this they are mistaken for by a carefully prepared table of statistics, it has been proven that married women are healthier than single ones, and that between the ages of twenty and fifty, more unmarried women die than married. These same tables also show that longevity is always found among married females. Instances of long life and old age is comparatively unknown among so-called "old maids." The Art of Prolonging Life, a book of recognized ability lays it down as a rule, that, to attain a good old age, one must be married. Physicians, who have made a special study of woman and her diseases, claim that in spite of the various perils of maternity the health of women who are married is better than that of single women during the child-bearing period.

The single life, when carried to the point of old maidism, or old bachelorism, is not the most happy life. There is no pleasure that can long be relied upon to furnish happiness. Selfish and solitary pleasures can not long satisfy or even amuse, and unless the mind is continually inventing new pastimes, new amusements, such as attending parties, clubs, balls, missionary meetings, teas, etc., life becomes very monotonous, the woman soon settles down into the stay-at-home, and because she finds no new lovers, she is soon looked upon as a wall-flower. She finds that her charms are fading. She is not quite so good looking as formerly, and she can no longer attract the male sex. These little slights add to her general discomfort which in time changes the disposition and she becomes peevish, selfish and has peculiar fancies and eccentricities. The desire of children is stimulated by the love of pets and public opinion is correct when it pictures the "old maid" with her parrots, cats and poodles, and we are



thankful that these common household pets can take the place of the love of companions and offspring. Were it not for pets, more of these poor unfortunates would become disgusted and commit suicide. Statistics show that about two-thirds of the suicides are single persons. They also prove that the single are more liable to insanity than the married. In France, Bavaria and Prussia, there are four single persons insane to one married one. But the single life is sometimes forced upon people. Old maids and old bachelors will tell you that they loved once and their love was not returned, or that parents objected, or that the person loved, died, and they have never seen another that would take the place of the first love. To strengthen the position taken, they say that nature provides but one love and when that love is gone, there will never be another. This is not true; it may be partially so, for as long as they cling to their first love, they can not love another. Should these unfortunates be compelled to remain unhappy throughout life, for the single reason that their first love is dead, or did not return their love? No, they should cease to think of them. Remember "there is as good fish in the sea as was ever caught." Then go fishing. You say "how go fishing?" We say make yourselves lovable by promoting womanliness. The trouble is in yourself. You have allowed yourself to run down sexually, and those who have allowed themselves to do this are not so attractive to the opposite sex.

Stimulate sex. Sex alone can give you the red lips, red cheeks, can give elasticity to your step, rounds out your person and attracts the male sex, and will give you pick and choice in spite of your homeliness. You need not remain single unless you choose to do so. But some will say, "I don't want any married life in mine. My sister is married and she is unhappy, my mother was unhappy, some of my schoolmates married and they are unhappy." Well, why are they unhappy? The fact is not hard to find. Some of them married for money and neglected to love. They have never ceased loving the one not their husband, and have never tried to love their husband; they have expected him to love wait on, caress and take care of them, but they have given nothing in return. This leads to coldness and unless remedied, by returning love for love, will result in quarrels, unhappiness and finally separation and divorces. Marrying for money or position has made us a nation of greedy money grabbers. Getting and making money is the ruling passion. Love matches are



no longer fashionable. Money matches having long since taken the place. Oh, they did love but now hate each other. Well, whose fault is it? Selfishness can account for much of the disagreeableness and coldness. All unhappy marriages could be converted into happy ones, if a little care and a forgiving spirit is shown. But women remain single because they have a life work to accomplish. They feel that to marry would dwarf their interest in their work. If it be literary, they think that marrying would occupy much of their time, as there would be bearing and nursing children. They feel to have a husband would be a continual draw-back, a hindrance to any and all ambition. They forget that the women who have accomplished much good for the world, were married.

Harriet Beecher Stowe was married when she wrote her *Uncle Tom's Cabin*—the book which accomplished so much towards freeing the negro—what greater ambition than that? The leaders of fashion are all married women; we find that three-fourths of them were married, or have at one time been married; and also, that that they have made excellent wives and the tenderest of mothers. It must be remembered that unless marriage is accomplished, there will be an incomplete development of certain organs. All organs are under the influence of the mind, and when these organs remain unused, they, of course, are not properly developed. When the organ is not fully developed, there is a portion of the brain which remains undeveloped. There is something lacking which exercise and full functional development completes.

### HOW TO SELECT A HUSBAND.

Few questions are of more importance to a young woman than that of the selection of a life companion.

All must choose either happiness or misery, virtue or vice, honor or shame, in choosing a husband. The relations of husband and wife are so intimate and complicated that their proper and happy adjustment outrank all other social considerations.

It stands equal or next to health in securing happiness and general well being, we should therefore look into the constitution, organism and parentage of the young man we wish to select. All have a right to select their food, and should have a right to choose their own husband. The happiness of others is affected in your choice, but much more is your own.



If we have decided to have a family, self-preparation is first, and then the selection of a right sexual mate. If it is time for you to contemplate marriage, the questions, when shall I marry? who shall marry me? or, shall I marry at all? are grave questions and require serious consideration.

As to when you shall marry, if you are of proper age and have found a suitable companion, you may marry at once, or at least as soon as you can get ready, as you will need a family at forty.

Having decided to marry, you will require a good husband (a poor one is better than none). But you should select the very best out of all you can command; this is as important as your life itself.

Examine carefully his physical, social and moral character. For what is life without health? What are the sickly worth to themselves or families? A good physique is indispensable even to mental power and moral excellence; they wax wane, or become vitiated, according to the existing physical condition.

Men always have worshiped and will worship at the shrine of female beauty, and women at that of masculine strength. Both consist mainly in animal constitution. No woman should seriously consider marriage unless she carefully considers one of its essential ends—the rearing of a family. The man she marries is to be the father of her children; he is to bequeath to them the constitution which he himself possesses. The mother may enjoy perfect health and a faultless constitution, but if the father's constitution be shattered she must expect the same in her children. Therefore, let those girls who know no better choose little-footed, little-faced, small-boned, shriveled, nervous, soft-headed and soft-handed, white-livered young men, well nigh emasculated by their feminine habits; but you do not want them. They will make miserable husbands. They are not sick enough to nurse, nor well enough to excite your whole-souled love. Clerks and dandies are indeed polite, but make poor partners. Robust workmen are altogether preferable. Good, firm health and hardy constitution is the only safe reliance for the support of a family. It is the capital and stock. Ability to work exceeds bank stock.

The habits of the prospective husband should be known, because they affect the constitution. Continual disobedience to the principles and conditions of health will undermine any constitution. The young man himself may have fair health and consti-



tution, while his parents will have consumption, scrofula, syphilis, cancer or some other constitutional disease, which might be transmitted to his children. And let us say right here that a young woman, in choosing her husband, is conditioning the physical interests of her children. As far as she herself is concerned she may be willing to mate with a physical wreck, but she has no right to curse her children with the heritage which a wreck would give. She owes a duty to herself and society to bless it with good members.

### THE MARRIAGE OF RELATIONS.

Most States have gone so far as to enact statutes forbidding marriage between persons who bear to each other the relation of first cousins. Moses condemns it, and censures the patriarchs for disobeying the law of nature. The Koran says, "Ye are forbidden to marry your mothers, your daughters, and your sisters, and your aunts, and your cousins, and your foster sisters, and your wife's mothers." Christianity has almost from its origin interdicted incest; it is the one great cause of human deterioration, and has almost extinguished the royal families of Europe. They were at one time the notables of the land, for physical strength, for force of mind and character. In the isolated villages of Switzerland, where the marriage of first cousins is common in generation after generation, the children are dwarfed, idiotic, deaf mutes, scrofulous and rickety.

In a report to the Massachusetts legislature, it was stated that one-twentieth of the idiots were children of cousins, and from ten to twelve per cent. of all deaf mutes were children of cousins; and in fifty-four such marriages sixteen were barren, eight lost all in infancy, and twenty of them produced scrofulous, rickety, consumptive, deaf and dumb or idiotic children. And the world is full of like inferior products of cousins. Such children often curse their parents for inflicting them with such deficiencies.

With regard to deaf mutism, statistics show for the most part, that the closer the degree of relationship between the parents, the more numerous are the number of deaf mute children born. For example, one marriage between an aunt and nephew produced three deaf mutes. Four marriages between uncle and niece produced eleven deaf mutes. Twenty-six marriages between first cousins produced thirty-eight deaf mutes. Sixteen marriages between second cousins produced twenty-eight deaf mutes.



Forty-seven marriages between blood relatives produced seventy-two deaf mutes.

Cousins who are married happily should not be made miserable for life in dread of having defective or deficient offspring. There is more danger from taint of blood than in mere relationship. A strong love between two cousins is good evidence that they are adapted to each other in parentage ; yet there are plenty of others quite as lovable as cousins, and we should run no risk of impairing offspring. Few families are wholly free from some lurking predisposition to serious mental or physical disorders, and it is not well to risk the development of this, by too often repeated union. Those persons who have had large experience in raising the lower animals have established a rule that crossing nearly related individuals two or three times produces the best specimens, but when carried beyond this it leads to sterility and degeneracy.

### GENERAL QUALITIES OF A HUSBAND.

Habits, health, race, temperament and education are qualities a woman should scrutinize in the man she intends to marry.

**Health.**—No man who is in poor health should ask a woman to marry him ; neither should a woman marry a man in poor health. If it is a temporary derangement, they can both afford to wait ; if the trouble be chronic, it is likely the result of some constitutional defect. No man is at his best when out of health ; and a man in ill health is not so patient, so forbearing, or so considerate of others as he is at other times. In the first few days after marriage there is ordinarily a revulsion in the feelings of a man towards his wife ; he is likely to be cross, impatient and selfish, thoughtless and uncompanionable ; and if he is sickly he will be unable to exhibit the very virtues that are necessary to counteract this, and the new wife, seeing him thus, is almost irresistably impelled to a feeling of repugnance and positive disgust ; and at this time a barrier may be erected between them which it will require years to remove. As conception sometimes follows the first approaches of a newly married couple, it would not be desirable to have the husband become a father when he is in this physically debilitated condition. For his sake, for her sake, for mutual relations' sake, for her children's sake, a woman should not marry a man in poor health. Poor health abnormalizes the normal functions ; hence the disagreeableness, sinfulness and



hatefulness of children and adults just unwell enough to be always in a fret.

**Race.**—As there are race characteristics which play an important part in determining the comforts, happiness and pleasure of married life, women should marry men who are of the same race as themselves. The union of two persons of different nationalities frequently brings into contact peculiarities that are antagonistic, and domestic friction is sure to follow. There is no psychological objection to the intermarriage of different races except between the light and dark races; as a result of this there would be no improvement. A white woman marrying a negro or mulatto would have weak, sensual, animalized children. But on the contrary, a union between a white male will be frequently of the greatest advantage, as at least to sounder physical and keener intellectual development in the children by the intermingling of the races, as is seen in a large scale of the admixture of whole nations in Europe, where the amalgamated succession was very much superior to either of the progenitors.

**Temperament.**—Persons too nearly alike in temperament ought not to marry as it has a tendency to develop constitutional weakness in children. It is not absolutely necessary to choose an opposite temperament, but only avoid a too great similarity. It will be found that a woman will not find great happiness in marrying a man who is intellectually her inferior, or one whose education is inferior to hers. The best thing will be for both to stand equal in this respect, but when this is not the case it is better for the husband to be superior, as women naturally look up to, and not down on their husbands. He is the legal as well as the natural head of the house. In proportion to the amount of ignorance or inferiority of the man, so much will be the respect of the wife for the husband. It is not advisable for any pure woman to join herself to a man of loose or vicious habits. It will be impossible to find a man who is absolutely pure, perfect and clean, for there are certain habits which make any man unfit to mate with a pure woman. A great many young women are seized with the foolish notion that they can marry a depraved or sunken man, and raise him up and reform him, is a mistake. The experiment succeeds in about one in two thousand times, and the probabilities are that the man would have reformed anyway.

It is less important that the man be tidy, than the woman ;



but it does matter whether he smokes or drinks, swears or chews, How can a truly refined woman see her intended puff, chew, spit tobacco juice all over everything and everybody, if ever so genteel. These habits are disgusting, filthy, and they should be banished from the society of all refined women. When proposing, candidates are equally eligible in other respects ; if one chews, smokes or drinks, while the other does not, by all means, choose the latter ; you do not want to be compelled to endure the loathsome sight, of seeing the man you love, smoke, chew and spit ; you will not relish the odor of such a man's breath.

Besides, these habits generally impair the man's looks, render the teeth yellow, swell the gums, gives the complexion a fiery red leaden or yellow color, soils the linen, and gives the most foul and fetid odor to the breath ; yet dipping is equally objectionable on your part ; a man such a slave to his passion and appetites that he will not abandon them for his own sake or the girl he loves, will not be likely to do it for his wife's sake. Your influence during courtship, will discover whether you will be able to accomplish this reform.

**Love of Mother.**—Filial love is the first qualification of a good husband. A man who will treat his mother disrespectfully or speak of her in terms of reproach or indifference, testifies by such actions, that there is something unnatural in his moral constitution. He should not only love his mother, but his sisters as well ; they should be objects of his special regard, care and watchfulness. The young man's heart should swell out with filial pride at the very name of her, who in pain and sorrow, brought him into existence ; whose soul is wrapped up in his health, prosperity and happiness ; who with watchful care exhausted herself through all those days and years of perilous infancy, childhood and boyhood ; such a young man will make a kind and loving husband. But if he fails in these regards, he will give evidence of a selfish disposition ; he will be likely to look upon a wife as a chattel and designed for his personal comfort ; he will respect no woman profoundly or tenderly, no matter what her relation to him will be, for he does not respect the person to whom he owes his being.

**Kindness and Disposition.**—Kindness is the key-note of the home life, and is the most desirable quality in a husband. The value of a natural good temper, sweet and pleasant spirit, can hardly be overrated. The kindness and disposition of the hus-



band and father, gives tone to the household. It is the essential principle of love, since it excites to bear and forbear, and to busy itself to do little things, calculated to do good to others. Kindness will go farther and give more pleasure than happiness with all the asperity, haughtiness and pride that can be assumed. Kind, sympathizing words will stimulate the drooping spirit of a woman's breast. Besides, a man with a kind and affectionate disposition, will always find friends, or easily make them, where the opposite disposition will make only enemies. It is essential to the happiness and well being of every family, especially is this so, if the children possess this trait, and more especially mothers. Upon this, very much will depend, whether you will live happily together.

### PURITY.

A high moral tone, along with uncompromising integrity, is pre-eminently demanded in the conjugal relations. Nothing whatever averts love as soon as this deficiency. Love must have unlimited confidence, or perish. Moral principles naturally elicit affection, while trickery and all wrong doings are fatal to it. It is a law in physics, that in the material world that evil corrupts the good. Place a single decaying apple in a bin of good fruit and the whole will be destroyed. It may be two thousand to one, but the one will conquer. One bad pupil will ruin a whole school of good ones, and the woman of a pure mind and chaste life, who mates herself with a man who does not possess these qualities, but possesses their opposite, runs a great risk; herself being pure she will be shocked at the grossness in the one with whom she finds herself united. Following this will come loss of respect and reverence. Should these emotions be disturbed there must inevitably follow a shaking of the affection, since respect is the foundation of all lasting affections, the chances are that she herself will suffer. It has been said that a woman's affections are so constituted that the meaner and baser the object of her affections becomes the more tenderly it is loved and cherished, and it is easily to see how the wife would be compelled to suffer the degradation of a depraved husband. He leads and she follows. If he is bad and she is good the possibilities are that she will go to him. She may be above him morally but gravitation tends downward. It is a great deal easier to go down than it is to go up; it is easy to pollute a pure mind, but hard to refine and elevate an impure one.



Girls who have mismated have degraded into coarse, repugnant and offensive women, and cases are very rare where women have elevated their husbands to the refined plane on which his wife moved at marriage. There is no greater mistake than the notion cherished by girls in their "teens" that they will marry men and reform them. Marriage is too serious a matter for sentimental experiments. The time to decide questions concerning the character of the husband is before marriage and never after, as it is then too late. The marriage vow says, "take this man for better or worse," and if it is for worse she must abide by it. Then let your courtship decide the character of your husband.

Shun a base soul as you would a deadly contagion. Avoid all risk of realizing the dark picture that has been portrayed, by refusing to unite your fair, pure life with one that is smirched with an impure life or soul. Give your life into the keeping of no man, unless his life is pure, wholesome and clean.

The very fact that a young man finds delight in society argues for his purity of heart. The vile do not seek the good, but each soul seeks its congenial soul. No woman need marry men of coarse mind and depraved life, because there are men to be found who are pure.

## TEMPERANCE.

Every woman is bound to protect herself and prospective children, by marrying only those who are strictly temperate. Absolute temperance should be rigidly insisted upon in the husband. The man who has acquired the drink habit, no matter what his other qualifications may be, is not the man for a woman to marry. Occasional drinking is almost certain to eventuate in drunkenness ; so that no woman is justified in running so great a risk. No evil is more prevalent, more wide-spread, more destructive of all that renders life enjoyable and desirable, than that of intemperance ; it ruins the body and soul alike. It attracts men under the guise of friendship ; worms itself into their confidence ; steals away their reason ; undermines their resolutions ; influences their passions and sweeps away their bulwarks of purity and honor. Woe to him who putteth the cup to his neighbor's lips, or to those of his own children, either by example or entailment. There is no temptation equal to those which are hereditary. A constitution of alcoholic hankering is unquenchable.



Alcohol is a foe to the human, so subtle and powerful that it destroys the very humanity of man, and vitiates all the mental processes of those who indulge. It induces pauperism ; degrades morals ; induces crime in individuals and communities ; corrupts the home into a hell, and wastes the material resources of the family with a lavish and remorseless hand.

The history of alcohol, is a history of misery, of vice, crime, woe and wretchedness throughout the entire world.

He who drinks for pleasure, will drink for passion ; he who drinks for passion, will drink for madness ; and he who drinks for madness, will drink for death and hell.

Young woman, to think of uniting yourself to a tippling lover, the precursor of a drunken husband is indeed awful. She is committing her happiness to one who is not his own master ; the slave of a demon, who knows no relentment, no mercy or remorse ; she is entering upon a future that is dark and threatening for her peace, comfort and material enjoyment ; she is electing for the father of her children, one whose veins are poisoned with a venom that pervades every globule. To be obliged to behold this liquor-loving stream, flowing on to generations yet unborn, breaking out here and there, as it flows on, washing her very name from the face of the earth, is a woe unutterable and undescribable. Every consideration and prudence urges upon you to avoid such an alliance.

The demon of drink will not let its victims alone. He will entice, cajole or drive, until he has them completely in hand ; he will then rush them along into the abyss of ruin.

He cursed Canan, debauched Noah, brought down the malediction again and again against Israel. Therefore, adopt the motto, "Total Abstinence or no Husband." Do not marry even moderate drinkers, as you will run the risk of blighting your own affection, and will see your sons, your pride and your support, hopelessly ruined.

## JEALOUSY.

Jealousy is universal, inherent and not educational ; it has been and will always be. It is an affection of all climes, people, persons and things ; it is no fungus, but is expressly adapted to keep love at home. There are some very excellent men, almost perfect in every respect, but who are unfortunate enough to be afflicted with insanity regarding the woman to whom they have given their affection and desire to marry.



Jealousy leads to the most deplorable unhappiness when the husband is afflicted in this way. He is not only chronically unhappy himself, but those around him, and especially his wife, suffer the effects of this "green-eyed monster." A jealous man at every opportunity will insult his wife by twitting her of infidelity of every man of their acquaintance.

How galling it must be to her who is chaste, sensitive, and upright, to be subjected to such suspicion. No sensitive spirit can brook such treatment. Frequently it has driven the wife to crime, insanity or the grave, while the husband who is afflicted with such feeling, to drinking, gambling or murder. These are not the traits to insure domestic peace and happiness, but a fruitful source of misery, wretchedness and woe.

Of all the passions, jealousy pays the bitterest wages, and exacts the hardest service. If you desire a peaceful life, and earthly happiness, watch your acquaintance with a man, who watches with scrutinizing gaze, your every movement in the social circle, and if jealousy lurks in his bosom, misery will dwell in his heart ; so be sure that no jealous blood courses through the veins of your intended.

**Moral and Religious Traits.**—There are few instances of genuine affection among the marriages of white men with squaws or Africans, except where the latter have first been civilized. No heathen could love and marry a Christian. The more either sets by their religion, the less they will set by each other. A Christian must marry a Christian, a Turk a Turk, and a Chinese a Chinese. Catholics blend with Catholics, Protestants with Protestants, and seldom if ever with those of the opposite faith. No one can remember of a single instance where a Catholic married a Protestant and lived happily together. While each will be compelled to attend their own church, and this in time will lead to separation on all other points, and each will insist that their children should be educated in their own faith, and not in that of the other.

Presbyterians love Presbyterians, Episcopalians, Episcopalians ; Methodists, Methodists, and Baptists, Baptists.

Conflicting beliefs can love each other when the sexual attractions are sufficiently great to overcome the religious difference, but different religious beliefs will greatly diminish their natural assimilation ; even those of different nationalities will find their



natural difference a source of many more discords than concords, and should marry only when love is sufficiently strong to overrule this national antagonism. But never consider seriously a proposition of marriage from a man who does not possess a religious veneration, and a substantial, moral character. Religion and morality are the foundation of all true character.

The man who has no sensitive regard for God because he is God or right because it is right, is no proper custodian of a woman's life, reputation and happiness, and no woman should select such a man to be the father of her children and their guide in tender years. Nothing can take the place of these qualities; he may have wealth, standing, talent and power, but if he lack a sensitive moral nature, and an enlightened conscience, he lacks all. It has been proven by the investigation of modern sciences that moral and mental qualities are hereditary. A thief, a murderer, a robber, imparts like propensities to his offspring, and through this channel, notwithstanding all efforts of religion and state to reform, criminals increase in a greater ratio than population; therefore never risk your happiness, and that of your children by marrying a man who is known to be of bad character.

**Cold, Distant Men.**—Think twice before giving an answer to a man whom you know to lack affection. At least one should be affectionate, but it is better if both are. Her lot is hard indeed, who with warm gushing affection is repulsed when she expresses it. She who dearly loves to be caressed, should be; and if she marries a cold, distant man, whose love is merely personal, she must expect to pine and starve, and dispense during maternity, with that sympathy and tenderness so much needed.

## INDUSTRY AND FRUGALITY.

These are twin virtues. They could co-exist without either. No man, however opulent he may be in the present, has a certain guarantee against the want and poverty in the future; but where the two qualities are found in a man, a safe and comfortable future is assured. He may never become wealthy, but wealth is not always to be desired, but he is certain to acquire a competence.

It is the husband's part to provide the wife with a home and maintain the same, and the wife's place to make that home happy. Marriage is too sacred a step to contemplate wholly from the ma-



terial standpoint. "Marrying for a home" is as much to be condemned as marrying for love and nothing else. A woman has a right to insist and demand of a man such qualities as will insure a permanent home. Too often young women under-estimate or over-estimate the present condition of the man who asks of them their hand in marriage. A practical but very near-sighted maiden will often make the remark, "O, he has nothing but a trade." She forgets that he is a skillful workman; is industrious and energetic in his work; temperate and frugal in his habits.

Others will say, "O, he has a good home and a competence." It would be well for her to inquire how this home was secured; it would be well to observe whether his industry is spasmodic, or has any existence at all, and whether he is lavish and extravagant in his expenditures. It will only be a matter of a few years that the practical and skillful workman, at middle life, will be honored and respected with a comfortable home, and will have accumulated competence and enjoy a happy lot, while the young man who has inherited a fortune will have no advance and perhaps had flitted away, in idleness and extravagance, all that had been given him a score of years ago. The maiden must be wise as well as practical, and draw her conclusion from the different factors which exist in the life of her lover. Industry and economy will, other things remaining the same, succeed in the race of life, while the lack of these, even in opulence will inevitably bring want.

The absence of any considerable means whereby to support a family need not deter one from getting married.

A strong mind and arm of that man, nerved by love for his wife, will carve for himself and her a fortune in comfortable old age.

A woman should desire her husband to be industrious, for physiological and moral reasons, as he will enjoy better health and have less temptations.

Idleness is the parent of vice; industry of virtue. Industry is the condition of virtue, contentment and happiness. He will create a better home atmosphere, will be less selfish and more helpful and considerate of others. He may be prosaical, but he is honest; he may be plain, but he will be pure minded and will have no time for the tempter. Too busy to form evil associations, indulge vicious habits or cherish extravagant dreams, but he is a certain winner in the long race of life, and happy is the



maiden whose heart has been given to such a man, he will fill her life with sterling joy and substantial blessing.

**Business.**—Closely associated with and assumed in industry and frugality must be found the possession of some legitimate means of making a living. No man has any right to expect success, no matter what his condition may be, if he has not mastered some trade or profession. The ancients insisted upon this. It matters little how opulent a father might be, he should compel each of his sons to make some business calling and master it in all its details. It might be that something in the future would deprive the young man of his patrimony, and he would then have a means of sustenance in the skill of his hands—a very wise provision.

It makes a very companionable sort of man; he who sets up a home of his own and asks a woman to take the risk of life with him, must be more than a pleasant companion. He is to be the architect and builder of the family's fortune, industrious and thrifty. A man who lays hold on life and business, as if he had a mission in the world, and intended to discharge it with fidelity, is to be regarded with admiration.

You should never rush blindly into matrimony, or take it for granted that he who professes much love and attachment will provide for the wants of the family without asking whether or not he has any way of doing it. Young woman, if the man who is offering you his hand in this holy covenant, has no definite business, or if he has and does not possess proper energy and industry to follow it, look him squarely in the face and ask him, "What do you intend to do with me?" No sensible man will be offended with you for asking such a question, but will have more esteem for you and the good common sense you have displayed, if he be a man worthy to be a husband, seeking a companion or helpmeet for himself, one who is willing to engage in the battles of life with him and bear equally its burdens.

Men and women without business are the pests of society; they are thieves, stealing what is not their own; they eat that which they have not earned; beggars and drones, they waste the fruit of others' industry; they are leeches and blood suckers, evil doers and set the example of idleness and dishonest living; they are the vampires that are eating out the lives of the community. They waste the golden time of youth in endless wanderings and changes. They are continually trying everything that comes to hand; they are grasping at everything and catching nothing.



This invariably indicates instability of character. Such men will rarely succeed under the most favorable circumstances; ordinarily they stand no show at all.

### LONG ENGAGEMENTS.

At your engagement, you have merely selected and your familiarity should be intellectual and not affectional. As we have already said, the more personal love, the more impatience and tendency to hasten marriage, yet to establish a platonic love, requires more time than is usually given. Undue haste, puts love upon that carnal plane, which at first cloys and then disgusts.

The luxuries of courtship are unsurpassed, too great to be forestalled or shortened by hastening marriage. A perfectly happy courtship is a promoter of conjugal felicity, yet if anything requires, hasten the marriage, but, as a rule, engagements should not continue longer than six or eight months or a year at the farthest, as long engagements are hurtful and unnecessary. The close personal relation which arises between persons who are engaged, should not be continued for too long a time; they lead to excitement and over-stimulation, which is certain to lead to debility, danger and disease. This is especially true of sympathetic, nervous and excitable dispositions, therefore if possible, never have your engagement terminate in marriage under three months (yet if anything requires consummation, hasten marriage) nor continue it for a period longer than one year.



## MARRIAGE.

**The Right Time to Marry.**—The period at which the body attains the most complete development is the proper time to marry.

Physiologists have fixed this time to be, in this country, about twenty in the female, and about twenty-four in the male; although it is possible for the growth to have been completed before these ages, ossification of the bones is not fully established so that development is incomplete before the age of twenty. Different nations have established different laws, fixing the earliest date of marriage; they seem to have been made without any reference to physiology, under the mistaken notion that there is no difference between puberty and nubility.

The woman when she marries enters a new life and a trying one. She should have every advantage in her favor and should select the season which would be the most advantageous. Very much of the real enjoyment of the honeymoon will depend upon the entire freedom from business cares and concerns. In the country, autumn will be found the most favorable season, as then the harvest will be gathered and there will be plenty of leisure time. A new home can be set up, and its arrangements made in all details without much haste. There is nothing that will delight the young folks so much as the arrangement and management of this new home. In arranging it, they will get better acquainted and understand each other's likes and dislikes.

**The Season of the Year.**—Statistics go to show that the spring and fall are usually chosen, but on the whole, the spring is to be recommended, as in case a birth should occur within a year, the child will have attained sufficient age to pass the period of teething more easily before the following summer.

**The Time in the Month.**—There are certain times in a woman's month that would alone indicate the time for marriage.

The time between her periodical sickness, whether it be two or five weeks, she should choose a day equally distant from the two periods. If they occur every twenty-eight days she



should allow twelve days to intervene between her entire recovery from her sickness and the day of her wedding. This would bring her safely into the period of nature's sterility, and she would not suffer the embarrassment consequent to her pregnancy, and this would be the time in her month when she would be in her full complete enjoyment of her best health and will have entirely recovered from the exhaustion consequent to her sickness.

**The Wedding.**—After having been properly courted, and made a judicious selection, examining all the details necessary for the future happiness, they have decided at last to get married. This being decided, the ceremony and how it shall be performed shall next attract our attention. Too many brides are concerned as to how the wedding will be considered by others and less mindful of the excitement and drain that is being made upon her own nervous resources.

The wedding is the great event of a woman's life, and she must therefore make the most of it, or she will be socially degraded. The bride usually has the privilege of deciding how, where and when she will be married; it will be also advisable to consult the bridegroom, as to the particular arrangements. His judgement is much better than hers, and he will ordinarily favor all arrangements which impose the least nervous excitement upon the bride. Men, as a rule, are simpler in their tastes than women. She will likely think of others but he will think mostly of her.

If the bride resides with her parents, or has a home, the ceremony may be performed there, but if she is a church member, it could be performed in that place.

In the latter event, it will be customary to return to the home of the bride, or if the young man has prepared a home, they may retire there. A formal reception or banquet may be given.

The ceremony and the banquet, and the attendant excitement, will be found a constant and great drain upon the vital powers, and is sure to be followed by a great deal of depression; for this reason it would be desirable to have the wedding as simple and brief as social etiquette will permit.

The great change from maidenhood to wifhood should be attended with no excitement; all social festivities, however pleasurable should be avoided on account of the unnecessary drain upon the nervous forces. It is just as well to have the marriage entirely private. The bride and groom, with a friend or two, can go to the clergyman's house or a magistrate's office where the



ceremony can be performed, and then depart upon their wedding journey.

At this time, it is usually customary to issue "at home" cards. They will find the rule given in any book on etiquette.

**The Banquet.**—The custom to follow the ceremony with a banquet is a very unwise custom. It is usually given at a very late hour, but should really take place at the time your ordinary meal is eaten, as it contains materials that are rich and indigestible, highly seasoned substantials, followed by cakes. It is all more or less intended to derange digestion and indirectly increase the physical and mental strain to which the bride will be subjected. Many persons, laboring under no excitement and ordinarily in good health, would be injured by feasting at irregular hours.

**The Wedding Tour.**—It is usually customary to make a journey immediately after marriage, of a week or month or two. It is a custom of some commendable features, but many that are the exact reverse. It is advisable that the husband and wife should be alone for a week or two, that they both may enjoy the pleasures of each other's society and become thoroughly acquainted with each other.

It is not unusual for them to devote this time to travel, sight seeing and living at hotels and in public houses. This is very unwise. Under the best of circumstances sight seeing and traveling is very exhausting, and very much more so during the first weeks of married life. The event itself is disturbance enough for the system; and to be hurried hither and thither and to be stored away in narrow berths and inconvenient carriages, the annoyance of waiters, cabmen, baggagemen and hangers on of every description is sufficient trial for any one under ordinary circumstances, and what the bride requires at this time is absolute quiet and rest, and this cannot be obtained in the bustle and strangeness of the city hotel.

The foundation of many an unhappy future is laid during the wedding tour. The young wife is tried beyond all her experience and the husband shares this weakness. Many men who really love the woman they marry are subject to slight revulsion of feeling for a few days after marriage. A half regret crosses their mind for the happy bachelorhood they have denounced. There is a mutual revulsion of feeling that is entirely natural



and will pass away in a few days. Neither should be alarmed nor loose self-control, but each requires indulgence and management for the other. A mistake now is a mistake of a lifetime ; and more than one woman has confessed that her unhappiness commenced from her wedding tour.

The fact that the consummation of marriage means a great change to her physically, is the reason why she should have a short period of rest. A short journey will be of benefit, in order to escape the prying eyes of friends and relatives. They may choose some quiet resort ; some peaceful, home-like place.

If marriage occurs in the summer time, a sojourn at the seashore, in a quiet hotel, will be delightful. In a few days the new wife will be familiar with the appointments of the house, and there will be home-like feelings come over her, or they may visit some prudent married friend of the bride.

In this way the wife will gain the home rest, so demanded, and an experienced counsellor and can confide in her and tell her what she would not tell her husband. In this way they will gain more intimate knowledge of each other's character and prepare a way for future happiness.



## THE WIFE.

Wifedom is to a woman the crown of success. From infancy she has looked forward to the time when she would be the wife of some good man. That period has now arrived. She has laid away the happy and beautiful life of girlhood, and has adopted the life of wifedom. In her eager anticipation of the pleasures of married life she has looked upon the brightest side, and thought only of the complete happiness which is to be hers.

But marriage means more; it is a serious step, and to a woman it means more than to a man, as it will require more at her hands than it does at his. It means to her great sacrifices, loss of friends, associates, and often loss of home, relations and all these things which she held dear during single life.

Together they enter the new life and together they go out into the world to build and rear a new home. To them this is a pleasant task, but it means the beginning of life in earnest. To him it means a home and children of his own. Heretofore he has been battling life and carrying its burdens without enjoying any of its blessings. Although he has lived with his parents, he has lived as a stranger, wishing for this time when he could gladly leave them and his former surroundings to take up the newer responsibilities of a home of his own, with a wife who could share its blessings with him.

To the wife it means the surrender of much which has a fast hold upon her life and affections. The surroundings and associates of that home, from which she must go, are a part of her very being. She has bathed in a mother's affection and tenderness; enjoyed her counsel in all her daily affairs, and reposed in that mother's boundless love. She has had a mother's sympathy, one to whom every trouble could be confided trustfully, and from whose storehouse of knowledge and ripened experience instruction could ever be obtained.

She has had a father, whose wisdom and strength was always ready to guide and support her.

She has had a sister who shared in all her confidences and experiences and who exchanged affections; she has had the con-



solation of a brother, who has protected her with his strong arm, and she in turn has been his comforter and sharer in brotherly and sisterly love. But all this must be left behind; all these tender associations and helpful surroundings and interwoven delights.

Heretofore others have pointed out the way, but now she must choose and guide her own steps. Others have led and she has followed, but now she must be a leader. She has been a loved and trusted pupil, but now she must teach.

With marriage, a change comes over her whole surroundings and being; a complete change is effected in a few moments. She is now no longer a daughter to be honored and pampered, a sister to be nurtured, but she has now become a wife, a ruler of a home, the friend, companion, comforter and adviser of a husband.

The sober and thoughtful maiden contemplating marriage must see that the future holds in store many new experiences, and she must realize that she is inexperienced, new, and must be tried. She passes from the known and trusted to the unknown and doubtful. She may think she knows the man, and may feel willing to trust the keeping of her life and happiness to him, yet she must realize that he is to her a stranger, even though she may have known him from childhood. His life has been different from hers, and much of it spent in a sphere into which she has never entered. But now his life and hers must be one; she must share his thoughts and emotions, his affections and interests, his home and his lot. As he goes, so must she, as he has joys and sorrows, so must she; as his ambition matures and interests lead, so must hers; as his welfare is her welfare, she, at this thought, must be filled with anxious concern.

The friends and confidants of her girlhood must be given up. She and her girlhood friend may have agreed to be friends and confidants throughout life no matter what may happen, but she now realizes that these associations must necessarily cease. She has new thoughts, new duties to perform, which naturally lift out of and away from her girl friends and associates into that newer life and duties of wifedom.

These things are said not with a view of discouraging the step, but rather to stimulate the girl to thoughtfulness, in order that she may well weigh the step about to be taken. This step, if well taken, will bring with it a joyfulness and happiness never experienced before, and if the maiden has chosen wisely, all of her reasonable expectations will be realized. Wifedom is a sphere



vastly larger than girlhood. Its blessings and privileges are uncountable, yet bring with them cares and responsibilities not known in girlhood. But the love of husband far over-balances all this. It is greater than the love of father, mother, brother and sister. His love is a love that will be wider; deeper, sweeter and more abiding than the love she has experienced in her girlhood days. Conjugal affection is one that meets every want. An all-absorbing affection fills every longing and satisfies every craving.

The marriage day has come, the ceremony has been performed and the maiden is a wife. Maidenhood, with all its joys, pleasures, sorrows, delights, or whatever else belonged to it, is gone and never to return, and instead of it wifedom has come to take its place, with it comes new duties, new joys as well as new sorrows. The future may be a bright dream. It may bring to her many anticipated pleasures, but it may bring to her many new and unexpected sorrows. She has assumed her new duties, the new world is entered, the new delights, duties and responsibilities are assumed and life has begun in earnest.

The busy scenes that have led up to the last step, the marriage ceremony, is now over. They have been full of excitement and bustle. The new wife has been the busiest of the busy and she has had little time for sober thought. But now all is over and the excitement and bustle has ceased. She feels the change come over her, her heart flutters with excitement. She experiences a feeling of dread. She is homesick and thinks of the friends with whom she has spent her past life and dreads to part from them. Then she remembers her husband and feels as if she could fly to the ends of the earth with him. She now realizes that her whole social life is changed. Soon she will forget that she is a daughter and sister and only remember that she is a wife. She will forget that she has brothers and sisters and remember that she has a husband who will be all in all to her. If her choice be a proper one, she will experience a joy which will hold sway over her life until a newer, holier and higher one takes its place, although she has separated from father, mother, brothers and sisters and will never again feel towards them as she has in the past. She will soon come to notice that she has assumed new relations. She will find her husband's family and people are her family and people and his friends are her friends. She knows that new friends are added to her circle through her husband and



so it will be throughout life, his friends will be her friends because she is his wife. So she gradually feels her position to the world and knows that between her and the world stands the one object near and dear to her, her husband, and whatever comes to her through him she gladly accepts and when children are born to her she will love them as much, because they are his children as much as her own. The past will fade farther and farther, while the present becomes dearer and sweeter and the future grows brighter and more hopeful, happy wife.

**The Wedding Night.**—As marriage is the second great change in the life of woman, it will be well to consider what marriage means. As the maiden becomes a wife she assumes a new relationship, the sweetest, the best and at the same time the most natural of which she is capable. Transmission of life is the great object of conjugal union and as a duty to repair the ravages of death and thus perpetuate the race, and as the woman plays the most important part, as she becomes the depository of the new and future being, it is necessary therefore that she be not altogether ignorant of nature's responsibilities of her position.

Should she be ignorant, it would be the means of great suffering, disease and perhaps death. She should then be taught these scientific matters, so as to avert and lessen the pain which awaits the first step of the new life. If you have studied the external genital female organs, you have noticed several peculiarities of this organization. It sometimes happens that an imperforate or very strong hymen, a small vagina, a partial closure of the lips, or a nervous and irritable condition of these parts generally, may make the first association of the sexes not only difficult and painful, but even hurtful. In most of these cases, a little care and gentleness may obviate both pain and difficulty; a want of it may create lasting trouble and dissatisfaction.

Young persons of both sexes should understand these matters in time and these minor difficulties could be easily overcome and even more serious impediments, if well understood, and they would neither alarm or disgust, as frequently happens. Mothers should be sufficiently informed as to the existence of such impediments and should seek the advice of the family physician. No young female should enter into marriage totally ignorant of its duties and liabilities.

As we have already remarked, congress between the two sexes is sometimes consummated with difficulty, therefore any-



thing like precipitation and violence should be avoided. Violence can only be productive of injury. It sometimes happens that the first approaches are accompanied by a slight hemorrhage or flooding. A loss of blood does not always occur, and the absence of it proves nothing. The Arabs and the Israelites and others carefully preserved and triumphantly exhibited the evidence of it as an infallible sign of the virtue of the bride. Its presence is as destitute of significance as its absence. Widows, and wives long separated from their husbands, frequently have a like experience.

The temperament has a great influence; the lymphatic temperament, the pale blondes, frequently suffer from local discharges and from the parts being relaxed; in them there would be but little pain and no hemorrhage. Brunettes, however, never have such trouble; the case is reversed. Frequent use of baths, oils and unguents, although serviceable, are objectionable and impracticable.

It sometimes happens that this great change produces swelling and inflammation of the glands of the neck and a general constitutional disturbance and disorder of the nervous system.

In a little while, however, all irritations will subside, and no suffering or distress of any kind should attend upon the performance of this most important function; nevertheless, a too frequent indulgence at this period is a fruitful source of inflammatory diseases and occasions temporary sterility. It was formerly customary to allow three days to elapse before the first nuptial approach. It was a very wise one, as it secured for the young wife a soothing and restoring influence of rest.

### DIFFICULTY OF DECIDING VIRGINITY.

Most of the signs of virginity are very obscure and of little importance. We have already noticed the failure of the old methods and tests generally. They are of little value even as legal evidence. The only one of much value is the hymen, a small membranous band partially closing the opening of the vagina.

It was supposed to have remained perfect until ruptured by the entrance of the male organ. We now know that this is untrue, for young children, even infants, sometimes rupture this delicate membrane in scratching, as it sometimes happens when thread worms crawl from the rectum into the vagina and later



from secret practices and self-pollution. It frequently happens that the hymen is so tense and thickened that it requires an incision or partial diversion in order to allow the passage of the menstrual fluid.

Customs and manners are like fashions, changing according to the notions of people. That which is valued by one is depised by another.

Viery, in his natural history of races of savage people, speaks of certain savages who fasten the lips of the vulva of young girls with a ring in such a manner that it would be impossible for them to have intercourse, also as a protection against intercourse taking place without consent. And another race goes so far as to sew the labia together, leaving but a small opening in order to allow the passage of the menstrual fluid. The husband at the time of marriage celebrates the wedding by cutting or separating the labia by means of a knife or other sharp instrument.

A contrary custom prevails with certain Asiatic and African tribes, of having their maids defloured by their slaves and no man will marry a girl while she remains a virgin. The ancient Armenians practiced this same strange ceremony; it was customary for their virgins to go to one of the temples to be defloured in order to be able to secure a husband. The ancient Phœnicians are supposed to have followed the same strange custom, always compelling their slaves to perform this operation for them. But among civilized races of people virginity commands a greater amount of respect, and has already been said, men often ruin their own and the lives of their best beloved by a too strict test of virginity.

Virginity, so far as the hymen is concerned, is but a transitory matter and can be produced artificially so as to almost defy detection after it has been lost. It is a common practice among harlots to resort to this trick in order to dupe their unsuspecting victims.

It is a remarkable fact that the hymen may be so elastic and the lips and vulva have such contractile power in some females that they may have connection a great number of times and yet preserve all appearance of virginity.

One author on the subject of prostitution tells us of two girls who had been accused of being prostitutes. They affirmed that they were virgins and demanded an examination. They were examined by an experienced surgeon who made the statement that



he was not sure of one, but gave his opinion that the other might have had connection. They had both long been prostitutes and had even had venereal disease.

A French author, Jacques, tells of girls who had been on the town for ten or twelve years and yet could easily pass for virgins.

Parent Duchalet tells of another case. He saw a woman who was fifty years of age and had been a prostitute ever since she was fifteen, and in whom all the organs might easily be mistaken for those of a young maiden.

**Adaption in Marriage.**—One of the first things to be sought after in marriage is perfect adaption of the sexes, both mentally and physically. It has been said that true love is blind, and there is nothing truer than that two persons, totally unfitted for each other, meet, fall in love, marry and bear children and live in perpetual torment—and all because they do not use a little common sense in choosing their companion in matrimony. Pure love of a Platonic kind should not be the ruling spirit in making a choice of a life companion; neither should an animal or passionate love alone be a guide, but rather the selection of one naturally fitted, one who attracts and reciprocates love and passion; and when such a state or condition exists it is safe to say the pair will become more attached and bound together the longer they live and cohabit.

Marriage is a serious undertaking—it means not only companionship, but that the husband will protect and keep the wife and children; the wife until separation or death, and the children until maturity. In return he should expect all of his wife's assistance in rearing a family, as well as in saving and taking care of the money earned. But men get fooled in choosing a wife from among the fashionable young ladies of their acquaintance, and no poor young man can afford to marry a so-called society belle, unless she has plenty of money in her own name. Society girls, tight lacers and models for milliners and dress makers should be the last person that a poor young man, one living upon a salary, should choose for a wife. They stay up late at night, eat late suppers, wear tight corsets, and almost dance themselves to death when laced so that they can scarcely breathe. They lie around home or are driven around in a carriage; do not take sufficient exercise to keep up digestion, and after years of dissipation they become total wrecks and chronic invalids, a bur-



den to themselves and an expense to their families. The young man who marries one of these will have an invalid for a companion and will become a poor and badly paid trained nurse for the rest of his days. He had better have a mill stone tied around his neck and jump into the water rather than risk marriage with one of these. What man will and must have is a companion ; one that will and can help with and lighten the daily burden of life, without becoming a drawback and an additional burden. But human beings are animals and have the same instincts and passions as the lower type : hunger, thirst and desire for sexual pleasure is shared alike by all. Therefore, social fitness should be taken into account in selecting a mate, and reciprocity is utterly indispensable and necessary for the happiness and contentment of husband and wife ; without it neither can be very happy, either in love or wedlock, and the absence of reciprocity is misery to the ardor of one and the coldness of the other. A cordial law of both love and connubial bliss is that the more gentle and tender the affection of either the more cordially will it be reciprocated by the other, and the more cordial the reciprocity the more exalted will be the pleasure appertaining to the parental function. This constitutes the one essential embodiment of love, and is the principal object in love and marriage. Its anticipation is the chief incentive of the former and the chief motive of the latter. What other motive does or should prompt either, and in what consists the marriage vow, but in the implied and fully recognized act of covenanting with each other, participating together in this ultimate repast of love? Candidates for matrimony seek, proffer and pledge each other to participate in this function of love with the other, and this is the origin of the marriage rites. The bridegroom justly thinks himself entitled to these rites, because the very act of the bride becoming his wife, consists simply in the surrender of her celibacy and a pledge to partake of this parental function. The value of matrimony is mainly the value of the repast. Everything depends upon this, but other advantages incidentally grow out of marriage. This alone is the tie that binds, and the absence of reciprocity means an absence of happiness or contentment. Matrimonial felicity can not be had without reciprocity and mutual pleasures, and those who can not make each other happy in this, the ultimatum of love and marriage can not in minor matters, and those who



fully and perfectly reciprocate in this prime matter will find that all the minor matters of discord will be drowned in this keynote of concord—the happiness conferred by each upon the other is the sole occasion of love, and all those who are qualified to confer on each other this summum bonum of matrimonial felicity, are bound together by the strongest bond of union connected with our natures. To the blooming bride we will say, that for the happiness of yourself, for the happiness of your husband, note every invitation to this repast, and cordially respond. Any coldness or squeamishness in love's repast will dampen your companion's pleasure, and, of course, his love will grow cold. Repulsive refusal, persisted in, will be the death blow to matrimonial felicity, and a blasting Sirocco to your husband's fondest hopes, for it will force him to drink the mere dregs of the marriage cup instead of the delicious nectar that he had expected to sip at the hymenial altar. Therefore watch the rising desires of love and bestow the welcome embrace, and by so doing you will rekindle its flame and crown your blessed union with the complete fruition of this, the embodiment of all its pleasures. But nothing will sting him so sorely and severely as unsatisfied desire, and any husband or wife who goes reluctantly to the hymenial altar never live happily together. Remember, reader, if you can recall any of your friends who have married at the oversolicitation of friends or parents, and who have reluctantly yielded to these embraces and did not reciprocate them, and you will remember divorces ensuing soon after a brilliant wedding. Coldness and lack of reciprocity have caused it. Therefore, let all remember the fact, and do not allow your friends to choose a husband for you. Ardent love in one can never compensate for the loss of it in the other. It only increases the disparity. Coldness in one and warmth in the other is as ice on fire, and those who love each other enough to marry, will need no urging, but will rush to each other's arms. Never marry for money, but for love only, and do not discard a lover because he has money, but be sure you do love him enough to give up home and friends to be his life companion, and those who are married should put forth their efforts, as far as possible, to re-instate reciprocity in this vital requisition of matrimony. Disappointed love leads to disappointed desires, and this leads to hatred for the one who was previously loved. Nero's incestuous desire for his mother, when interrupted, caused him to plot her death, and caused him to



consummate that most revolting matricide with impatient haste and the most infamous cruelty.

Potiphar's wife loved and desired Joseph, and when he disappointed her by refusing her, she afterwards hated him with an intense hatred, and so intense did she hate him that she caused him to be kept imprisoned for years. Many men and women of to-day can remember in their own lives where enemies were made by refusing reciprocity. So, no wife can safely refuse to note these desires in her husband, and I remember a case where a husband constantly refused to gratify his wife, and while fulfilling her maternal relations this aroused hatred and the worst passions; she sought a paramour and what she was denied in wedlock. Hence, we proffer the following to all who intend to seek wedlock or those who have already accepted the ties:

Reluctant wife, you must yield by doing all you can to oblige a beseeching husband. You throw yourself upon his generosity and, thereby, you quell that desire that coldness or refusal will only aggravate. Your cheerful submission to what he knows to be disagreeable to you, at once excites his pity and gratitude and this awakens his sympathy and love in your behalf, subdues desire, for the simple reason that he who dotes upon you cannot take pleasure in what occasions you pain. He will take your will for the deed and will not insist upon so delicate a matter unless perfectly agreeable to you, or to feast himself at your expense. Comply with his request, this is to kill his desire and you should remember to always yield cheerfully and with a view to please him, and by so doing you will lay your husband under the highest obligations to you, and he will be full of love and gratitude to you; but a cold or unkind refusal will beget increased importunity and cause him to insist on his rights and threaten you with vengeance if you do refuse, therefore, never refuse unless you can give abundant excuse, such as sickness, or some good cause.

**Physical Adaptation in Marriage.**—This is of far more importance than at first would appear. Women are not all alike in looks and build, neither are their organs of generation all the same size and degree of perfection. Some males are large, others are small; some females are tall and others are short.

Professor Fowler has told us in his remarkable book of the importance of love and reciprocity in marriage. However, he has not spoken of this, the most important thing in causing reciproc-



ity. It would be absurd to expect a woman with full and complete development of the generative organs to be satisfied with a husband who possessed small and imperfect ones. It would be punishment to compel healthy and vigorous females to live with these dudes of men. The pleasure of coition very much depends upon the size and adaptability of these organs and any disparity in size simply means that there will be a lessened amount of pleasure. I have made examinations of women who were undeveloped, inasmuch that it was next to impossible to introduce a small examining finger into them, and in some cases have found an absence of the uterus and ovaries, yet these women were united in marriage to men very much more vigorous and healthy. Then again, I have made examinations of women who were many times larger than their husbands; of course, this is as much out of proportion as the other. Yet such people are compelled to live together as man and wife, there being no legal grounds for divorce. Then again, I have witnessed men who are abnormally developed, and almost twice as large as the ordinary, united to women who are many times too small for them. Is it any wonder then that some men have buried several wives. There is something radically wrong with our social conditions. The poor, deluded women who marry these human brutes are afraid to apply for a divorce, or to leave their husbands, on account of the scandalous talk. Any true woman would rather die than have the breath of scandal weigh against her; she would be afraid that people might say something against her character. Then again, she is not allowed to pop the question and is compelled to take her chances, or remain an "old maid" all her life. Better be a healthy, living "old maid" than a martyr to such an animal as that; even if she does not die she must live the life of a poor, sickly, lifeless creature. Our laws should be amended. A woman should have a fair trial, or at least a medical examination before marriage, and if there is any mismating or undevelopment, marriage should be prevented. The old German custom of Bundling New York's early settlers was that when a couple decided to get married, they slept together one night, and then, if they still felt inclined to marry, the ceremony was performed. This custom prevailed until very recently. The Congo Africans have a singular custom to-day. When a girl has become old enough to marry she is presented with a dress manufactured by the intended husband. If she accepts this they immediately become engaged



and he prepares a home for her reception. If the girl is old enough and desires cohabitation, they immediately start out on a period of probation, which, if it proves the unsuitability of either party for the other, the girl returns to her mother. The Congos justify this procedure in saying that they do not care to see their daughters unhappy and the period of probation will surely settle the question of suitability. There is a custom among many tribes which surpasses this custom of the Congos. Polygamy is practiced among these, for the reason that a woman will not know a man after she finds that she is pregnant. This is a custom of the tribes and is insisted upon. Then again they have a great desire for children. A man is respected according to the number of his wives. But when a man desires a wife he selects a girl and pays her attention. If he be her choice she will allow him to sleep with her, and at this time an incomplete copulation takes place, which influences the young woman either for or against the man. Although this custom is often indulged in by the young men and women, illegitimacy seldom occurs, on account of the stringency of the laws.

**Lateness of Marriage.**—For some reasons known only to themselves, some women marry late in life. The question is then asked, will conception take place as readily as it would had marriage occurred earlier in life; and if conception should take place will the labor be more tedious and painful than in earlier marriages?

As to the first question we answer, that it is a well-known fact that the woman who waits until a few years only before her change of life, will be almost sure to have no children who will survive. This can be accounted for by the fact that the continued self-restraint, required during these long years, to a very great extent causes a drying up or atrophy of the ovaries and uterus, thus lessening the amount of blood in them, and of course the ovaries do not ripen ovules as often as they would under stimulation; and it sometimes happens that girls practice self-pollution during the earlier years of life, while others keep their passions under control by palliatory drugs of various kinds. Both of these have the effect of dwarfing the ovaries and uterus, which results in sterility during the latter years of life.

Therefore, the woman who marries late in life is not very apt to have children, but on the contrary, the woman who marries early in life will continue to have children, and will be very apt



to bear later in life, according to the time of her marriage ; and those persons who desire to marry for the sole purpose of bearing children should marry early.

Women who marry late in life have another disadvantage. In the earlier years of life, the bones of the pelvis do not completely unite, having a cartilaginous union at the point of union with the sacrum and occasionally the pubic bones do not completely unite until about the age of twenty-five. But all of the joints are completely united by the time the woman is thirty or thirty-five years old. The vagina at this age has to a degree lost elasticity and should conception take place late in her ovarian life, a healthy foetus at full term would be most difficult to pass through the pelvic strait and the inelasticity of the vagina and perineum would most likely cause rupture or tearing.

This need not deter any from having children. We have shown in another chapter where child-bearing can be rendered easy and it is especially to such cases as these that those remarks apply.

**Second Marriages.**—Are they desirable or beneficial? is a question that might be asked by every widow. Science seems to prove that woman's first husband is her eternal husband, although she may not have seemed to love him, yet, should she bear children, they frequently resemble the husband who has ceased to exist, and his impress will be upon all of her children. But although widowhood with its special privileges and immunities is often desirable to a living torment or living with an uncongenial husband, still a single life is too lonely to be desirable. Then, again, women may say, "I have loved once, and I cannot love again." This is only partially true; women can love but one man at a time, but should that loved one die, would it be best for her to sacrifice her life to his memory? The answer is—No.

Love is the feeling we bear to some one of the opposite sex and this love is simply a natural desire placed within us to perpetuate the race, and since that love will be drawn out by the opposite sex, in exact proportion to the amount of sexual difference between you and in the amount of time spent together, it will be safe to say that one who is equally as well sexed as the companion who first excited this love, can draw you and compel you to love him just as much as your former husband, provided you will only forget or at least cease to think of the former, and only of the



present lover or husband. But another difficulty may present itself. You say, "I have children who oppose our marriage and who seem determined to prevent this match. True, I am lonely and long for the loving caresses and joyful experiences of the past but shall I bring a stepfather to rule over his and my beloved ones?" This is a question hard to solve and much will depend upon the disposition of the man. Study him well and especially his temper. See to it that he has no selfishness in his disposition, for should he be selfish and have a high temper, you must avoid a marriage with him. His love for children will have much to do with whether or not he will take care of your children. But second marriages are desirable for another reason. The fact that you have loved and married, proves that you possess a healthy organism, which manifested itself in a desire to bear children, although you did not say so in so many words, you did so by loving at all. Now, since we were created men and women for the sole purpose of bearing children, you should again select a good man, one whom you think you could love, and forget the old love and bury it all and transfer all of the old love upon the new and the old experience will return. You will cease to be lonely, no longer will you desire to be alone, but will think of and wish for the new one as much as you did for the old. But second marriages are desirable even if there is but little love at first. Women have so much to contend with that the widow with one, two or a dozen children, will be happier with a husband than without, even if he be not thrifty. But when women marry who have children to be provided for and nothing for them, no one can blame her if she marries for a home. With her it is a business. I know of one woman who has married four times and each time for money. All of her husbands died, but she succeeded in getting the widow's dowry and more by law than she should have had. Another woman who made marriage a business married only for money; usually old men, and the wife became divorced with the usual dowry. This infant industry, the child of blackmail, should receive attention from our law-makers. We can conceive of no crime, not even murder, so great as the crime of murdering love for gain only. But the widow with dependent children has a right to demand in second marriage sufficient substance to keep her children. But right here just one word about marriage and money. Money, they say, is the cause of all unhappiness among children of second marriages, and should the wife have



money or land left her by a former husband, or should the proposed husband have property—my! what a howl will be set up by these selfish mortals! They are afraid that the father or mother will give more to this one or that one than the former companion. But who ever heard of children that have been compelled to keep father or mother complain of their getting married the second or even the third time; and should there be two sets of children, there will be no inconvenience. Then let the question of second marriage become one of personal interest and should you be rich in this world's goods, you will want a husband to watch over your interests, but not control them, (you should always do that yourself), and to love and caress you and to help you in the bringing up of a new family that your name may be blest and your memory cherished long after you cease to exist. The Holy Writ tells us that it is not good for man to be alone and it means that it is not good for women to be alone. Widows should not consult the feelings of children upon the subject of a second marriage, so long as they desire to be married and they should not oppose the marriage of their daughters. No son or daughter can fill the place of a husband or wife to a mother or father, and children cannot rightfully oppose the feelings of their parents in this matter. Unless there be something morally wrong with the proposed father or mother. In second marriage, a reasonable time should elapse after the death of husband or wife before contemplating a second marriage; usually one or two years will be sufficient but should you have young and dependent children do not wait upon ceremony but hasten the time of marriage.

### PROPER TIME FOR SEXUAL CONGRESS.

Besides the age of the individual entering into this great function the time and manner of its performance have much to do. All organs and functions of the body require for the perfect and healthy preservation a particular time, thus hunger is the warning that it is time to eat. Then when it is time to eat the time and manner of eating decides the health of the individual, so also the time and manner of indulgence has to do with the health. Many persons think because the generative organs are under ordinary circumstances capable of action at any time, that it is a matter of little consequence what time is chosen or under what circumstances it may occur. This is a



great mistake and one that causes much disease and dissatisfaction. A time for sexual indulgence should be so chosen that the temporary excitement and after exhaustion resulting from it may not interfere with any of the bodily or mental functions, nor distress the system by necessitating too much effort during any needful exertion. Neglect or ignorance of this important rule often leads to great inconvenience and serious mischief.

Sexual indulgence immediately following eating is almost certain to be followed by indigestion, and sometimes vomiting.

At this time there is a temporary loss of power and relaxation of the nervous system, which arrests the action of the stomach.

Indulgence just before eating, causes the stomach to become so weak that digestion cannot properly take place, and as a result we will have fermentation. A proper time should elapse after eating for digestion to be almost or nearly accomplished. It sometimes happens that men experience a stronger desire for indulgence immediately after a full meal, especially if stimulating drinks have been used, which is caused by over stimulation, and results in exhaustion. It would be injurious to seek indulgence previous to any mental effort, as indulgence would leave the mind depressed, and too much exhaustion to allow such an effort; for the same reason it would not be advisable immediately after any great effort. The same remarks will apply to any muscular act.

In short, it should only be when the body and mind can enjoy repose, at least for a short period, both before and after that it should be indulged in, and none of the other functions are likely to be disturbed.

In the forenoon, nine or ten o'clock, after the mind has become thoroughly awakened, and the body not too much exhausted, will be found to be the best time, as at night, from the labor of the day and mental exhaustion, is a bad time, as the offspring would have little force.

## *LENGTH AND DURATION OF SEXUAL POWER.*

The length and duration of the sexual power depends very largely upon the manner in which it is used. A certain amount of natural indulgence is probably essential and conducive to health but when indulged in to excess, it is sure to be followed by more or less permanent bad results and no exact rule can be



laid down for individual cases. All should endeavor to discover for their own guidance how this gratification affects them and by so doing, they will find that a real gain will follow which will increase the power and extend the duration or the time and insure stronger and better children and increase the pleasure which will more than compensate for any temporary denial. The observance of regular periods will also be found beneficial to those persons whose systems are in regular action and whose health is nearly uniform as it will preserve the vital power and prevent both excess and premature decline. Sexual vigor in the male has been known to exist throughout the entire life after the sixth year. There was an old man condemned to do penance when over a hundred years old for an amorous intrigue and he had several children after that period.

In the female the period begins at what is known as puberty which occurs in different countries at different ages. Sometimes it occurs at the age of six and is usually discontinued to the age of forty-five but sometimes prolonged to the sixty-fifth year.

Generation usually ceases at the turn of life but the disposition and capability of enjoyment remains as long as there is good vitality.

The power and capability of enjoyment in man may be either increased, made to endure, or decrease, or be entirely extinguished according to the mode of life which the individual follows, and the association between those persons properly adapted to each other is less exhaustive and may be more frequently indulged in than between those who are not fitted for the other. The associations and circumstances under which it occurs also have their influences.

It is requisite for the act in order to be advantageous and pleasurable that it should be fully approved by both feeling and judgment, otherwise it would be more or less regretted and injury will be sure to follow.



## THE EFFECT OF EXTERNAL INFLUENCES UPON THE SEXUAL DESIRE.

Music not only has an influence upon the nervous system in general, but sometimes seems to exercise a special action on the sexual instinct. The influence of quiet forests, and of cone bearing trees in general, appear to exert an influence, stimulating the sexual desire. It is certain that persons who inhabit pine forests have large families. The season of the year has its influence. In the spring of the year, when the sun warms up the earth, and the trees are fresh in verdure, is the time that every living thing reanimates itself, and the impulse of reproduction is excited and gratification will be most beneficial to the individual. Children conceived at this time have a greater vitality and will be less apt to die during infancy. Indulgence then can be repeated oftener than at any other season. Temperament has an influence over reproduction. Love is said to be the ruling passion of the sanguine temperament. That love exerts the greatest influence and the condition of the brain also exerts a great influence for good or bad. Diseased conditions of the brain, and especially of the cerebellum sometimes totally destroys all desire and causes a complete condition of impotency. Irritation of the floor of the fourth ventricle occurs as in diabetes and other diseases in the earlier stages and greatly stimulate the sexual organs for a time and afterward result in the complete loss of power. This irritation frequently causes stimulation sometimes amounting to priapism (continual erection). The ladies of Turkish harems are well acquainted with this fact and often make use of it by shampooing the back of their husband's head. The mind exerts a great influence and all thoughts of purity and virtue stimulate it while the reverse tends to disgust. The state of the health also bears an important relation:

Those who are in perfect, vigorous health have more desire, while those who have poor or indifferent health, and those persons with consumption, diabetes or any wasting diseases have almost total absence.

**Certain Irritations** have a well-known influence. Handling the generative organs, irritation of the nipple of the breasts of the female excites desire.

**Influence of Drugs.**—The influence of *canabes indica*, *damiana*,



saw palmetto, cantharadis, phosphorus and nux vomica, all stimulate the sexual feeling, while camphor, the bromides, mercury and the iodides generally decrease it, and if persisted in will cause impotency.

### THE PROPER INDULGENCE OF THE SEXUAL DESIRE.

Temperance should be exercised in all things and this applies much more especially in the reproductive act. As here, a temperate and proper use is conducive to health and creates happiness, while abuse leads to misery, poor health and disease and death.

Constant and physiological exercise stimulates and builds up any particular part of the muscular system, while non-use or over work produces stunting and non-development and this applies equally. A too frequent repetition of the reproductive act is sure to be followed by consequences known to be injurious to the general health, while a too rigid continuance is not known to result seriously in causing more serious troubles than hysterical and nervous derangements. It will be very well to follow the recommendation of science and adopt a wise mean between the two extremes. We should follow the dictations of nature and by so doing women will escape from the hysterical and other disorders, which is almost certain to follow upon excess, as much as upon too great a denial of this passion. By satisfying this natural right, health will be preserved and strengthened and pleasures increased upon the gratification.

As hunger increases the taste of food, desire increases this pleasure. The proper denial and gratification of the wants of physical love is a source of good, not only to individuals but to that of the community, and thereby a double advantage will be derived. As it increases the appetite, the sympathy returns and the power for future enjoyment, while excessive indulgence will result in pain, disappointment and extinction of the affection. As love is a ruling passion and can be used for great good or for bad, it should be exercised with great care.

At any period of life, indulgence of the sexual act consumes a great amount of bodily vigor, and has a general depressing influence upon the system generally, and too frequent indulgence of this is always followed by more or less depression and weak-



ness. The memory and power of thinking enfeebled and the disposition changed, the mind will become clouded, and the memory fails; the natural and cheerful disposition will be followed by gloom and despondency. Young people should be instructed in regard to this influence upon the mental and bodily condition. The health and happiness of the future depend upon their conduct in regard to this matter. In young people, it affects the growth and development of the system; in mature age, it hastens the approach of the period of decline, and in old age, it is often the one thing that brings about the final end; but that which in early life is followed by temporary languor and a general depression is in more mature years followed by a train of symptoms very much graver and more durable, and sexual intercourse has proven fatal after a severe hemorrhage. It will follow, that those in poor, feeble health should be sober in the gratification of love. It is a well-known fact among organized beings that propagation has a powerful influence; animals are usually depressed and dejected afterward and some of them lessen the duration of their lives by multiplied sexual enjoyments.

It is not a doubted fact that a short absence or partial separation tends both to increase marital pleasures and to cause them to endure longer. It makes conception more likely as these organs act more energetically after the period of repose, and stimulated by a short restrain. It has been claimed by some that it would be well to have at least three years between every birth and some of the most eminent men of the world have been conceived after a separation of this kind, and their greater genius has been attributed to the greater vigor experienced under such circumstances and both the male and the female will have stronger desires and will indulge with only the happiest of results. It has been advised by some also that females should know how to prevent conception as a small number of children will be more perfect than a large one. As there are no definite rules to be laid down on this subject, what has been said should be taken merely as suggestions.



TIMES WHEN MARITAL RELATIONS SHOULD BE  
SUSPENDED.

There should be no co-habitation except when there is passion on both sides. If the male is passionate, and the female not, congress will be apt to be painful. Under these circumstances, it is well to discontinue sexual relation, but we are told in first Corinthians, VII 3-4, that neither the wife or the husband has the power to refuse the conjugal obligation, but there is certain legitimate causes for denial. If the husband or wife be in a state of intoxication, intercourse should be refused. If fecundation takes place while either parent is in this state, it will be likely to produce epileptics, imbeciles or idiots, as there are so many cases on record as to admit of no doubt of the fatal effect of drunkenness upon offspring at the time of conception.

Alcoholic habits of either or both parents have been known to really arrest the growth of the body and mind, in some instances the children, although living to the age of manhood, remain permanent infants, unable to utter only a few simple sounds, with scarcely sufficient strength to stand beside a chair and will be amused by childish toys. Persons who are convalescing from a severe sickness, those who are affected with consumption, scrofula, syphilis and wasting diseases should not be allowed to participate in sexual intercourse. It has been proven beyond any reasonable doubt that children created at this season, while there is bodily indisposition, ill humor or nervous debility, will carry throughout its entire existence some of the effects of these evils. Of course when there is any contagious disease, the refusal would be valid. Poverty or the wish to have no more children should only be acceptionally allowed as a reason of the denial.

During the time of the menses, sexual relations should be suspended, as at this time the irritation and the congestion of the uterus tend to other disorders, but there is no foundation in the old notion that scrofula was caused by this form of intercourse. During the latter months of pregnancy intercourse should be discontinued as well as during the first four weeks after confinement.



## PAINFUL CONGRESS.

There never should be any pain experienced by the wife after the first two or three approaches in the copulative act, but if there be pain at every approach accompanied by great nervous disturbance, it is an evidence of disease and the family physician should be consulted at once.

The function of so great a moment to the human race, one involving its very existence should be attended with pleasure, and the presence of pleasure is as indicative of health as its absence is of disease.

Dress reform is a movement in the right direction as the methods of compression by the means of a corset thereby causing displacement of all the internal viscera, which in time become adapted to the new and unnatural positions, become bound down and any attempt at intercourse would be necessarily painful. Disease of the uterus would necessarily follow.

When desire exists in the male and not in the female, the vaginal walls being relaxed and lying in folds, the male organ presses more upon one surface than upon another, causing stretching and frequently tearing and more or less pain, which would be of a knife-like, stabbing or cutting nature. A repetition of this act increasing the amount of tearing which must result in ulceration and inflammation is one of the most frequent sources of pain.

When there is a desire on the part of the female, the walls of the vagina become erect and extended, the small glands secrete a lubricating fluid and will prevent this trouble.

## PASSION IN WOMEN

Is absolutely necessary. When the Creator created woman, He would have created her passionless if He had intended her to be free from it, but as it is a necessity, and is found to exist in every living thing, from the lowest to the highest, and each male puts forth some form of effort to meet the female, and the female exerts herself as much to meet the male.

Although some have the bodily desire absent from organic defect, they manifest the mental, by appreciating the attention of the males, and they dote upon, cling to, worship, love to be fondled, petted, complimented, and delight to attract the atten-



tion of the male by flirting, captivating, fascinating him with lovable, conjugal sweetness, which constitutes the chief glory of woman and female character, and gives to her that lovable sweetness and grace of manner that fascinates and holds the male with that magical spell that women so often wield over men, and is as much a part of woman as the womb itself, and is the one thing necessary to begin the creative work by inspiring men.

Passion is stronger in woman when the ovule is fully formed and has started upon its way to become expelled.

After her system has become cleansed of all superfluous matter, and the congestion of the uterus attendant upon that state, excites in her desire, and awakens in her this passion, and she in man.

There is nothing truer in the laws of nature, than that amateness in one sex, awakens it in the other.

The male loves that in the female which improves offspring, and the tameness of the desire awakens it tamely in the opposite.

Woman controls both herself and her companion by the degree of her passion, and, since passion is simply the manifestation of the desire to create, she should control her passion and his, in order to better the offspring. And since all things have the time, as the time for budding in the Spring, the time for passion is the lunar period.

This principle controls the action of the male. No true male will obtrude where it is not at least welcome, therefore the woman's love is her safety and controls the male against the female.

Man is always ready, but waits the impregnating period in woman. His passion slumbers on until awakened by woman at her lunar period. Nature does things just right, and woman naturally is less passionate than man. This should be so as it of necessity limits offspring. But feebleness to excess is a disease, and a stamp upon offspring, imbecility and lack of energy. Feebleness in many children is shown by their being weakly, sickly and scrofulous.

Passion wonderfully improves the health, and health improves passion. All women who are sickly and have no desire, should take out-door exercise. Stimulate her love of her husband or some good male. She should seek amusements and pleasant surroundings and fulfil all the laws of health.



## SEXUAL VIGOR CAUSES THE POSSESSOR TO BECOME BEAUTIFUL.

It is the amount of sexuality or sexual vigor that an individual possesses that makes her or him appear beautiful to the opposite sex. Then to become beautiful it is well to cultivate this as first principle. All animals are sexually perfect because they obey the instincts of nature, but men and women are diseased or perverted sexually because they do not obey these instincts. All organs were created by nature to accomplish certain ends; the brain to think and cause us to act; the stomach to contain, digest and assimilate food to nourish and build up the body; the generative organs were created for the purpose of propagation and perpetuation of the species. Then since these organs were intended by nature to accomplish this purpose, any deviation from the natural use dwarfs, deforms and diseases them, thus over-eating, that is, taking in more food than is necessary to supply the waste and build up the economy, is not only waste but injurious, causing biliousness, congestion and inflammation, while a lack of proper quantity or quality will result in an undeveloped condition of the whole body. Those who most perfectly use and fulfil nature's laws are the most healthy and beautiful. Therefore, we should cherish that exalted regard for the opposite sex, in order to develop sex in ourselves; thus, any sexual aversion or nausea should be eradicated.

During puberty, when the sexual organs are developing into their most perfect condition be careful of yourself and if you have children, watch over them and see that they have right ways of living. See that they form no bad habits to undermine and tear down their systems. A few mistakes at this period will affect the whole life of the individual.

Do not fall in love too soon. Better wait too long than begin too soon, but when you have begun to love make a lifetime business of it. Choose one especially adapted to you and work for and cling to that one until you have developed a perfect love between you, or have virtually decided to depart in peace. As soon as your first love is given up find another and religiously exclude all others until you have broken up and lost all former loves. Let no quarrels or hard feelings mar your love, after having been once established, unless to break it up entirely. Let no



one interfere with your love and never interfere with any one else (parents or children included), but marry the one you love and the one that loves you in spite of fate and difficulties. Love with a heartiness and wholesoulness that will convince the object of your affection that there is no child-play in it. Give the person all of your love or more and nestle yourselves into each other's affections, making yourselves as lovely and as worthy of love as possible. Cultivate right habits of living and do not scold at each other's faults but love and educate a better feeling. Cultivate toleration and forbearance. Live and let live and agree to disagree. And after having exhausted all means of living pleasantly together, then get a divorce.

Supplant lust within love and sanctify and purify every sexual repast, as if it were to originate an angel child to love and be loved by both.

Treat your wife as you intend to be treated. Take good care of her health, sexual health in particular.

Be temperate in all things and especially in your sexual repasts and on no account profane them for the purpose of lust.

Put yourselves and keep yourselves in the highest human state preparatory to the greatest of life's work—creative of a human soul and offspring. Keep women who are carrying children in the very best mental and physical condition, and when children are born to you, nourish them as nature intended and govern them with love and reason; teach them that it is their duty to obey, but never frighten them into obedience. Obey every law of nature. It is the only beautifier and restorer.

### EXCESSIVE INTERCOURSE.

Although women, as a rule, are less amorous than men, yet for love of the husband and for peace, women often indulge more frequently than is best for their health.

Sexual pleasure is produced by magnetism and frictional electricity. Every male and female depend upon some form of electricity for their every thought and motion. Although we know we have a brain and can trace every nerve in every part of our economy, no one has been able to see the fluid which causes action. By applying an electrical battery soon after death, before complete dissolution has taken place, the human body can be made to take on motion, and by stimulation of certain portions



of the brain, we can cause the muscles of the leg or arm to move. Therefore, we must take it for granted that we are provided with a process of generating electricity which is stored up in the brain. This electricity is the chief element of attraction of the sex. Without it, amateness could not exist. With it, the person possessing it will attract those of the opposite sex who are similarly charged. Frictional electricity is electricity caused from rubbing. When the animal magnetism is exhausted, the only incentive to intercourse is frictional electricity which is very exhaustive to the participants. Sexual pleasure is heightened by the amount of the electricity present in individuals, as like elements repel and dissimilar elements attract, so that it is the same in animal magnetism. Therefore, to render individual electricity active in copulation, sufficient time should elapse between each indulgence to allow the male and female sufficient time to regenerate the peculiar electricity and condition common to each. The longer intercourse is abstained from, the more unlike the male and female become. For this reason, females who are cold, and sometimes experience a feeling of disgust at the mere thought of intercourse, are injured by an indulgence at this time. I am of the opinion that three-fourths of the diseases peculiar to married females is caused by indulging in sexual intercourse when they have no desire. In such a condition, friction of the generative organs, without complete excitement, induces inflammation and ulceration, and such other diseases as will finally destroy the life of the wife; and we believe that there are some people made up so strongly in their animal organs, that they can endure a greater amount of sexual indulgence. We also believe there are some men who have actually caused the death of several women, and could easily kill several more ordinary women. Such women could never satisfy such an abnormal desire, and the only safe rule for them, if they value health, is to seek a divorce or allow the husband to seek other company. In time, a wife will be disgusted with such a husband. On the other hand, some women are stronger, amatively, than their husbands, and such a wife will cause her husband to indulge too freely. This continual drain upon his magnetism and the continual loss of semen, will in time cause him to break down both mentally and physically. Our asylums are filled with persons who have brought on themselves this exhaustion by too frequently indulging their



animal passions, they being naturally weak in these organs. People of this character should never indulge under one or two weeks or longer.

## INFLUENCE OF DRUGS ON THE GENERATIVE ORGANS.

Remedies that stimulate the sexual function are called aphrodisiacs; and those which lower the sexual function are called anaphrodisiacs.

The aphrodisiac remedies commonly in use are phosphorus, cantharides, strychnia, damiana, saw palmetto, arsenic, chloride of gold, ergot and canabis indica.

**Phosphorus** in small medicinal doses, 3 or 4 drops of the oil, causes heat in the stomach and acts as a general stimulant, increasing the action of the heart and an increased supply of blood, with a special tonic action upon the generative organs. To be of service in impotence, it must be continued for several weeks.

It is a dangerous remedy when continued for any great length of time, on account of its tendency to cause fatty degeneration of the liver and other organs.

**Cantharides**—commonly called Spanish Fly, is a remedy used by unscrupulous persons for the purpose of stimulating the sexual appetite. In medical practice it is used only for the purpose of blistering. Spanish flies do to a degree induce venereal excitement, but a dose sufficient to cause sexual desire, will, in nearly every case, produce violent inflammation and swelling of the generative organs, stranguary of the bladder, bloody urine, and sometimes death. As a tonic, in weakness of these organs, it should never be administered in larger doses than two drops of the tincture three times per day. In cases where the crude drug has been used for immoral purposes, a leg or wing has been sufficient to cause great abdominal pain.

**Strychnia**—is only useful as an aphrodisiac in an indirect manner, and like phosphorus depends upon its general tonic action upon the body. Strychnia has a special influence upon the nerves, causing spasms, and when employed as a sexual stimulant it should be carefully watched by an intelligent physician. The dose of strychnia sulphate is one hundredth of a



grain every 4 hours. It is better administered in the form of *nux vomica*, 1 to 4 drop doses.

**Damiana**—has lately been recommended as a remedy of great value in the treatment of impotency. It is supposed to have a special stimulating influence upon the genito-urinary organs. It can be administered in one-half to one teaspoonful doses three times a day.

**Saw Palmetto**—or common Saw Palm, common to California and warm climates, has given very good satisfaction in my hands, and especially useful in the treatment of impotency of the aged. It possesses a great disadvantage in being directly irritant upon the stomach, causing indigestion of the stomach and small intestines. The dose is one-half to one teaspoonful of the fluid extract three times daily in water.

**Arsenic** is best used in the form of Fowler's Solution of Arsenic, the dose of which is from one to ten drops three or four times a day. It increases the appetite and digestion and improves bodily nutrition, and prevents to an extent, the process of waste; it stimulates the cerebral function and induces a feeling of well being.

The arsenic eaters improve in bodily condition, gain in breathing power and become more pugnacious and lustful.

**Chloride of Gold** in doses of one-twentieth of a grain, continued for some time, causes a feeling of well being; the mind becomes more active and a state of excitement or cheerfulness is induced in men. Marked sexual desire is noticed and erections are often painful. In women, the venereal desire is increased and the menstrual flow augmented. When gold is administered for too long a time it causes pain in the stomach and bowels and when continued longer it will cause fatty degeneration of the liver and kidneys.

**Ergot** or blasted rye acts as an aphrodisiac by stimulating the muscles to contraction and should only be used in combination with other remedies and in such cases only, as are caused from relaxation or flabbiness. The dose is one-half to one teaspoonful of the fluid extract.

**Cannabis Indica**.—Indian hemp, similar to American hemp or common bird seed, the dose of the tincture is ten drops to a teaspoonful. This is a remarkable drug. The habit of taking it



is common in India. It has the effect of causing a stimulation of the flow of ideas, hallucination and distortion of objects; to the hashish eater, minutes seem hours or even days and the knowledge of time is lost when under its influence. It causes an increase of the sexual desire and priapism sometimes results from full doses.

**Anaesthetics**, such as chloroform, ether, etc., have a decided influence upon the generative organs sometimes amounting to priapism in men and nymphomania in women. The intense excitement of the first stage by its general stimulating effect upon the brain and nervous system inducing a rapid flow of ideas, but will soon be followed by a complete paralysis and relaxation of the entire muscular system. The administration of these remedies has caused emissions of semen in men and an increase of the vaginal secretion in women sometimes completely misleading them and causing them to believe that an intercourse has in reality taken place.

**Condiments**, spices, peppers, tea, coffee, etc., by increasing the circulation and the stimulating effect upon the nervous system are aphrodisiacs, increasing sexual excitement.

**Constipation** causes sexual excitement by the mechanical action of the retained feces.

The **Anaphrodisiac** remedies are agents used to decrease and lower the generative appetite. They are mostly motor depressants such as camphor, tobacco, bromides and cooling applications such as alcohol, opium, odors, etc.

**Camphor** in small doses. The spirits of camphor in five drop doses acts as a stimulant to the sexual appetite, but in larger doses, fifteen to twenty drops daily, it lowers the tone of the generative organs and when long continued causes paralysis.

**Tobacco** is one of the most powerful of anaphrodisiacs. It exerts a special action upon the nerves and brain causing paralysis of the nerves supplying the chest and diaphragm causing death by asphyxia from its action upon the nerves of motion. It acts like prussic acid and paralyzes all motion. The dose of the wine of tobacco as an anaphrodisiac is one to ten drops repeated every three or four hours.

**Bromides** of soda potassium, lithiam, etc., are remedies most



frequently used to lower the tone of the generative organs. For this purpose it is necessary to administer it in large doses often repeated. The dose of the bromide of potassium is ten grains to half teaspoonful dissolved in water. In these doses there is no doubt but there is a marked diminution of the sexual feeling and of the power of erection. When these remedies are continued for long periods, they cause complete paralysis of the generative organs as well as of the lower limbs.

**Alcohol** in the form of wine, beer and whiskey in moderate quantities at first stimulate, then paralyze animal desire. This accounts for the great amount of impotency found among chronic and confirmed drunkards.

**Opium** in the form of the tincture or laudanum is one of the most certain of the anaphrodisiacs. The dose is twenty drops and should not be repeated under four hours. There is no fact surer than that all users of opium have a diminished sexual desire amounting to complete loss of power in those who have habitually used it for any considerable length of time.

**Odors and Scents** such as musks, *nymphæa adorata* and the different perfumes composed of them increase and diminish the sexual function. Among the harems of Turkey, they make use of an odoriferous pastile for the purpose of stimulating their desire. Musk is an animal scent supposed to be intended to attract the attention of the opposite sex. In small quantities it slightly increases but in larger doses, it diminishes the desire. Experiments upon the lower animals have proven beyond any reasonable doubt the power of the odor peculiar to either sex, to excite the other to desire although the animal from which the scent was taken had been removed. The dog being a fair example of the effect of scent.



## CAUSES OF DISEASE IN WOMEN.

When we ask our friends if they know one perfectly healthy woman, they remark that they knew one perfectly healthy woman. When pressed to tell who she is, they say, "My grandmother was a perfectly healthy woman." Yes, it is true, that perfectly healthy women are almost a thing of the past. With the advancement of civilization and the increase of personal comforts, we have a corresponding decrease in the healthiness of our women.

But why were our grandmothers more healthy than the mothers of to-day? We will answer that question in one word—They took exercise! Our grandmothers helped our grandfathers to clear up the home farm. They carried the brush, kindled the fires and very often they did quite as much manual labor as their husbands. They had keen appetites, too. No diet of slate pencils, pickles or chalk for them. No; they must have good, healthy, wholesome and nourishing food to supply their wants; and of course the large amount of exercise taken by them required that they take a corresponding amount of food to supply their waste.

Therefore, our grandmothers were workers as well as eaters. But what of the woman of to-day? We mean the woman of the medium class. As a rule, she is a novel reader. She will sit at home and read novels by the hour; and, if she is fortunate enough to possess one, her servant girl does the work; or, if she is not fortunate enough to have a servant, then her poor health (she always tells her husband that her health is poor) compels her to go to boarding. This poor health is a great thing: it not only furnishes an excuse for her laziness, but her husband, if he is able, furnishes a carriage and a driver. She is an invalid and must not walk—the doctor says so—so she is driven about and she lies around until her muscles become soft and flabby; she is constipated and has a poor appetite. She gets dyspepsia and becomes cross and irritable; her husband seeks elsewhere what he should receive at home. Her supposed disease gets worse; she is sent to the seashore or the mountains, where she fails to receive the comforts of home, and is compelled to walk about,



climb hills, etc.; her appetite improves and she comes back cured, or greatly improved in health.

I am greatly pleased at the change that is being gradually effected in the advent of the wheel, and I predict that in ten year's—yes, five year's—time the great army of invalid women will become a healthier, better and a happier lot of women than were our grandmothers. The excitement of riding a wheel will cause them to ride farther and farther each day; their appetites will improve; muscles will become hardened and better developed. They will become perfectly healthy in every respect, because the exercise is not heavy enough to break them down, as was the exercise of chopping down trees, carrying wood and plowing.

Again, the physicians are better educated than in those days, and when a woman really gets sick there are intelligent physicians who are able to treat her, instead of making her worse by using the old-time remedies of calomel, quinine and local treatments.

Irregularity in eating is a great cause of the disease of to-day. It is safe to say that more deaths have occurred from over-eating than from want of food. The clubs, the cinch party, the church social and all the little social affairs at which some kind of refreshments are always served and that at so late an hour that the result is indigestion, dyspepsia and all the attending evils caused from taking such indigestible things on an already over-loaded stomach. Our grandmothers had nothing like this, neither did they sit up or dance all night. No, indeed! They went to bed with the children and chickens and got up with them. Still, our women may go to bed with the chickens, but they seldom get up with them. Eight o'clock often finds them in bed. Then they complain of headache, and is it any wonder? How can a healthy woman sleep two-thirds of the time and not have headache?

Tight lacing is a cause of disease in women. But you can not convince them of this. A woman can not wear a corset and be healthy. If she wears a corset, she will be sure to lace it up fairly tight to-day; to-morrow, a little tighter; next day, a little tighter. The waist is soft and easily compressed and the first thing she knows, she has a deformed waist and a diseased body, but exercise soon does away with corsets, for health and corsets do not go together. Nor neither do exercise and corsets keep company. For the benefit of the race, we welcome this the age of exercise for women. It not only means healthier women but it means healthier and happier children as well as husbands.



With exercise, women will eat more food and be able to digest what they do eat, and with exercise they will naturally form some regular habits in eating and sleeping. She will adopt a dress that will permit freedom of motion, one which will not constrict or compress her body at any point. She will breathe better, look better and feel better than if she was all tied up in tight waists, corsets, bands and other unhealthful dress. She will wear shoes large enough to allow the feet to spread out and long enough to prevent cramping of the toes. Then when she has to stand upon her feet, she will be like a man, feel perfectly comfortable in both body and mind, and once she adopts these dresses and shoes she will never go back to the deformity-causing-corset and narrow pointed shoes. In those days, there will be no narrow waists, pigeon breasts, or lame backs. Their corns, bunions and tired feet will be a thing of the past. Regularity in the above habits does much to increase health and happiness of women as well as that of children.

### STERILITY OR BARRENNESS.

Sterility or barrenness in women is the inability to bear children. It is a frequent source of unhappiness. Most persons, if they are young, healthy and full of life, are satisfied for a time with the blessings and happiness of married life, but sooner or later the time will come when they will not be satisfied.

The feeling of paternity and maternity lurks at the fireside of every family and their longings will not be stifled and should it become apparent that this yearning cannot, from any cause, be remedied, it will be looked upon as little less than a calamity.

The study of sterility teaches us that a period of eighteen months ought to intervene between the date of marriage and the birth of the first child. The question of sterility is largely settled within the first three years of married life. If no child be born in that time and no improper use of preventatives of conception have been used, the chances are greatly in favor of the existence of sterility and against the mother ever having children.

The age of the wife at the time of marriage has an influence upon the expectancy of children. The interval between marriage and the birth of the first child is increased in proportion to the number of years. If the woman is past twenty-five years of age at the time of marriage, she will be likely to bear but few children.



Statistics show that women are most fecund before the age of twenty-five.

The English writers claim that women married under nineteen years of age, are not near so prolific as those married between nineteen and twenty-five, and that often at the age of twenty-four the probabilities of barrenness increase with the greater age at marriage. There are two periods in a woman's life when she is absolutely sterile. One is the time before she arrives at puberty and the other after she has passed the menstrual period.

The older a woman may be at the time of marriage, the longer will be deferred the time at which she will become sterile. Nature favors her in that. She allows her to bear children later in life than if she had commenced earlier, but those who marry young have a longer child-bearing period than others.

The probabilities of sterility increases with each year of barrenness and those who remain sterile for the first three years after married life will likely remain so during the entire life. All fruitful women have, usually, a period of less than two years between their births of the children and those who nurse their children usually remain sterile during the nursing period. Lactation is conducive to sterility as the vital forces are wholly employed in the mammary secretions.

Climate and latitude also have an influence upon fertility. There are more children born in warm than cold climates. This is due to the longer periods between the time of menstruation.

The food has an important bearing upon the number of children.

It is said that in Belgium the higher the price of bread, the greater will be the number of children as well as the greater number of infantile deaths. Season also has a bearing as spring time is nature's time for increase and is the natural mating period. It conduces to fecundity. Poverty has an influence, as poor people have much larger families than their rich neighbors.

Barrenness is usually blamed upon the woman, but it is not every male who is healthy and robust, that is capable of begetting children. Frequently women may be classed as sterile, who have been pregnant, and not knowing it. Such women have at the time of their regular monthly period, somewhat deferred, followed by what is known to her as an excessive flow and an excessive waste. It may in all probabilities, be a miscarriage and may be the only cause of barrenness.



**Coldness** is a well known cause of barrenness as well as a barrier to matrimonial happiness, while on the other hand, with some women, nothing seems to be in the way of conception, except too intense passion and over-excitement.

**Displacement** of the womb and attendant diseases are frequent hindrances to fecundity. Narrowness or stricture of the neck of the womb, a poisonous state of the blood from syphilis, scrofula and consumption are the most frequent causes. While it frequently occurs that the secretion of the vagina or the womb, may not be of the proper consistency, may be either too much acid, or alkaline, or stricture of the fallopian tubes, or an imperforated hymen, preventing the sperm from passing on to the ovule, it sometimes happens that sterility can be cured by separating the husband from the wife for a time, thereby removing the marital act; the novelty might have a stimulative influence upon the dormant procreative functions of the wife.

There is a condition of sterility which is the result of mis-mating. The proof of this is to be seen where the woman remains barren in a first marriage, but is fruitful in a second.

**Temperament.**—It is claimed by the ancients as well as by some of the modern authorities, to have an important bearing upon this subject; and they claim that persons of the same temperament should not marry, as such marriages are unlikely to be unfruitful, therefore blonde women should marry dark men, and thin women should marry robust men, and vice versa.

A wife should not despair if she is unable to conceive the first years of marriage, as barrenness will often disappear of itself.

Anne of Austria, Queen of France, who bore Louis XIV, after a period of years of sterility; Catherine de Medici, wife of Henry II, became the mother of ten children after ten years of barrenness, are examples of this. A London physician reports a case of a woman who was married at the age of eighteen, but although she and her husband enjoyed good health, they remained childless until she reached the age of forty-eight, when she bore a child.

And another well-developed woman was married at eighteen and did not bear until she was fifty.

It has been observed in Paris, that out of one thousand married persons, only six bore children in the course of a year, and



the ordinary proportion in that city for that time is three and a half births for every one-hundredth of the population.

It seems as if the existence of the natural intellectual and social culture of communities has the tendency to render marriage less prolific and the population stationary, or nearly so. The more intelligent the people the less will be the number of children born.

There are many cases of sterility that appear to be beyond the power of the present development of the medical science to overcome, happily many cases of sterility are curable by proper medical treatment. Just before and just after the lunar period is the time most favorable to fecundation and those persons anxious to have offspring should avail themselves of this fact. Absolute quiet for several hours, lying supinely quiet upon a bed after coition, has been helpful in the same way.

Prolonged contact of the organs after completion of the generative act will increase the chances of conception.

Hypocrates, the great father of medicine, taught this fact.

There is marked sympathy of the mammary glands and the uterus. Vigorous suckling of the breast or the use of a breast pump before the generative act will in many cases insure conception, and this is especially so in cases of barrenness due to coldness of the wife.

Horseback exercise will also be found useful in sterility from lack of desire when carried to a point short of fatigue, and no sterile wife should be discouraged and abandon hope of becoming a mother.

### NYMPHOMANIA.—CRAVING FOR SEXUAL INTERCOURSE.

This disease is not of very frequent occurrence. Those who have the sexual desire in excess should consult a specialist and learn whether there be any elongation of the clitoris, or nymphæ, or ovarian irritation. The most frequent cause of nymphomania is found in some existing brain disease; inflammation in the back and base of the brain, or tumors pressing upon the cerebellum, or anything which will cause irritation of the brain, may cause this disease. Girls and women who have suffered some severe reversal of love affairs, or who have long remained continent, suffer day and night with an uncontrollable desire for coition; a result of extreme nervousness and congestion



of the reproductive organs. The treatment is regulated by the cause producing it. If there is an elongation of the clitoris, it should be removed, but when there is no irritation of the clitoris, a trouble with the brain must be looked for, and that treated.

If the patient has recently quarrelled with her lover, every effort should be made to effect a reconciliation, and should failure result, mental diversion should be tried. There being an inflammation of the whole system, the mind and the brain and the reproductive organs having been wrought up and perverted, she is sexually insane, and must change the current of her thoughts and feelings. She should have a change of surroundings and change of employment; she should seek diversion in exercise, a ride on a wheel is good exercise for persons suffering from this trouble, as it gives amusement and entertainment. Also banish all unchaste thoughts; never allow your mind to think of a wrong thing, and above all avoid intercourse or masturbation. Some authors advise letting such patients have their fill, and recommend intercourse, as often as the patient feels that she can stand it. This is not good, as the excessive indulgence will surely result in inflammation of both mind and body, unless it is carried to a point of exhaustion, and even then a reversal of the condition may result. Local application of cold water by means of a wet towel worn over the external genitals and pinned front and back, has resulted beneficially in many cases. A cold sitz bath acts in the same manner. Medicines to be used are first, bromide of potassium in large doses. A teaspoonful dissolved in water, sometimes repeated in an hour, is the simplest and safest remedy. Also camphor in large doses can be tried. Also chloral hydrate in ten grain doses, sometimes gives relief. Blisters placed over the clitoris is a remedy recommended by physicians to prevent masturbation, but is too severe to be tried, and sometimes aggravates instead of relieves.

Diet and hygiene is the simplest and at all times the safest means of relief. There should be no stimulants of any nature taken—alcohol, pepper, spices, tea, coffee, rich animal foods, increase the sexual desire, and for this reason should be avoided, and one containing fruits and vegetables should be substituted. Exercise in the open air, and healthy and pure occupation of the mind are the remedies to be relied upon.



## PAINFUL COITION.

This is sometimes caused by an imperfectly ruptured hymen, the hymen remaining attached during coition, is put upon a stretch and causes a degree of pain that is often unbearable, and when intercourse is persistently carried on, it sets up inflammation, and sometimes ulceration, or there may be an increased amount of sensation that the little carunculas myrtiformis becomes so sensitive, that the slightest touch causes pain.

Constriction or smallness of the vagina is another cause of dysparemia. When there is a disparity between the organs of the sexes there will be pain during intercourse. Vaginal or uterine troubles and the various inflammations of the ovaries, uterus and vagina always cause painful coition.

**The Treatment** should be directed as much as possible to the offending disease. If there be any thickened condition of the neck of the uterus, a physician should be called and the offending tissue removed. The remnants of the hymen should be removed, while any smallness of the vagina can be dilated by the vagina dilators, used two or three times a week. Vaginal and uterine tumors should be removed, as well as any inflammation, where ever located.

## UTERINE DISEASE.

The above mentioned trouble peculiar to women, is commonly called "inward weakness." Weakness of this character can be avoided if a proper amount of out-door exercise is indulged in, and care in being prudent during the period of menstruation. Such improprieties as violent exercise, going out too thinly clad, or getting the feet wet, thus causing the flow of blood to discontinue, should be strictly forbidden. The troubles which follow in the wake of these imprudent actions at such a time are pelvic pains, inflammation of the womb, sterility and dysmenorrhœa. Another cause is undue mental excitement, during the period when the generative organs are developing, causing less blood to flow to them, and as a very natural result, very poorly developed organs. This is a common cause of amenorrhœa.

Improprieties of dress, such as tight lacing, wearing the skirts suspended from the waist, thus causing compression of the digestive organs as well as the uterus and pelvic viscera, result in uterine displacements, constipation and irritation of the bladder.



Position of the body has much to do as well as some other things in causing uterine diseases. Running a sewing machine, wearing high-heeled shoes, thus causing the body to be thrown forward ; rocking in rocking chairs is also a frequent cause. Let a healthy man sit in a rocking chair and rock, rock, rock all day long, and he will be bilious for a week. This rocking motion interferes with digestion and circulation, relaxes the abdominal muscles, causes constipation, which indirectly is the cause of much female trouble. Prevention of conception is a common cause. The cold water thrown against the uterus when it is congested with blood, nearly always causes inflammation of the body and neck of the womb.

Improper care and neglect during parturition. The uterus becoming injured, or when it has not gone down to its proper size—the woman getting upon her feet too soon, allows the blood to settle and causes inflammation of the body and neck of the womb.

Abortion, or attempts to cause abortion, either by means of drugs or instruments, is a source of uterine complaints. This is becoming more common, as it is no longer fashionable to have large families, and these attempts result in some of the worst forms of uterine troubles.

Excessive coition causes uterine disease. Habitual constipation is the most common of all causes.

Injuries at parturition, such as laceration of the neck of the uterus, also of the perineum, inversion of the uterus, are frequent causes. Sudden violent efforts, such as lifting heavy weights, causes flexion, version and prolapsus of the uterus.

A great many women, we might say ninety per cent. of American women are more or less afflicted with some of these maladies ; thus unfitting them for the functions of reproduction, and the ordinary avocations of life.

## INFLAMMATION OF THE WOMB.—ACUTE METRITIS.

Metritis or inflammation of the womb is a very common complaint, one supposed by many to be the most common of all uterine troubles, and directly or indirectly causes nearly all the other troubles. But this is a mistake. It probably does cause version, prolapse, flexion, as well as inflammation of the ovary and fallopian tubes. The inflammation may be of the neck, of the body, or of the lining membrane or the interior organs may be



involved, the inflammation may be either acute or chronic in character.

In the beginning of acute inflammation of the womb, there is a chill followed by fever, with pains, either heavy dragging or intermittent and sharp through the uterus and in the back. Pressure over the womb gives pain. There is irritability of the bladder and rectum, sometimes nausea and vomiting.



THE UTERUS AND VAGINA,  
HALF SECTION.

In chronic metritis or inflammation of the womb there is always an unnatural increase in the size of the organ. It is caused by frequently repeated parturition or ovulation and such dis-

eases as will impair the general health. Getting up too early after parturition, beginning hard work too soon after labor, abortion, or resuming sexual relations within three or four weeks after confinement, or the use of cold douches to prevent conception. Intercourse with impotent men. Diseases of heart and liver. The chronic form rarely ever follows the acute.

**The Symptoms** are a sense of weight and pressure, and dragging pains, increased by walking or standing. Pain in the groins, with a tendency to place the hands over the pubes to support the uterus. Patients are unable to ride over rough roads, and walk carefully. There is obstinate constipation and leucorrhœa, thick or pus-like in character. Should there be much increase in the size of the uterus there will be signs of pregnancy, such as morning sickness and enlargement of the breasts; but there is no cessation of menstruation. There is more or less headache of a burning nature, located on the top of the head. The general health becomes impaired, and there is sterility; or, if conception takes place, repeated abortions. There is neuralgia and an aching sensation in the back part of the head and base of brain, hot and cold sensations up and down the back, and suffering from dyspepsia. Loss of memory for words is another symptom common to the disease. The woman becomes



irritable, fretful and peevish; imagines that she will lose her mind, and unless relief comes will often become deranged.

**The Treatment** should be directed first to removing the cause. Nervous symptoms should be treated by rest from cares, pleasant surroundings, or a short sojourn to the seashore or mountains, or a visit in the country, if the patient lives in the city, or a short stay in the city if she lives in the country, will do much to relieve these symptoms.

Baths should be taken daily, but cold baths are to be avoided, as well as sea or salt baths.

The bowels should be kept regular; one soft evacuation daily should be insisted upon.

The kidneys and bladder also should be kept acting and free from pain.

Exercise in the open air, a walk for a mile or two daily, but no riding or driving. The woman should keep at her daily work but avoid all lifting and standing.

Sexual intercourse should be restricted, but not prohibited, unless it causes an aggravation or prostration. Remove all bands and restrictions about the waist. Suspend the skirts from the shoulders by means of suspenders. A comfortable support to the bowels should be worn, or the McKinsey support will fill all of the above requirements.

The diet should consist principally of fruits and easily digested substances. All rich foods, gravies, condiments, etc., should be avoided as much as possible.

An enema consisting of two teaspoonfuls of glycerine can be administered night and morning to insure an evacuation of the bowels.

The medicines which have given perfect satisfaction, are ergotine, in the form of extract, in doses of one fourth of a grain three times a day, or the fluid extract of ergot combined with cotton root in teaspoonful doses three times a day.

The local treatment consists in injections of hot water, either medicated or plain. A fountain syringe or the ordinary bulb syringe can be used. In either case there should be at least a gallon of water used at one sitting. The best plan is to have the patient undressed in bed with a large pan underneath the hips. Below this, to protect the bed, a sheet of rubber is placed, or she may lie across the bed, using the edge of the bed on which to place the heels of her shoes for support, and below this, the



rubber sheet is stretched, and a pan on the floor to catch the overflow. The nurse then places the long tube into the vagina for three or four inches and allows the water to flow, or squeezes the bulb. This may be done mornings when the patient is ready to arise, or at night when ready to retire. Sometimes a suppository of a medicinal substance, such as cocaine, jaquerity, hydrastis, tannin, etc., may be placed high up into the vagina at night, and let remain until morning. A new and valuable preparation is the sweet brier compound (advertised in the back of this book).

### LACERATION OF THE CERVIX.

This is as the name implies, a tearing of the mouth or neck of the womb. It constitutes about one-third of all diseases of women. It occurs to a slight extent in all parturition cases. Most of them healing at its turn without the interference on the part of the physician. It occurs in all stations of life, but is more frequent in cases where instruments are used.

**The causes** are tedious or precipitate instrumental delivery, a rigid os or premature rupture of the membranes, abortion, etc.

**Its symptoms** are pains in the lumbar and sacral regions, a digging pain in the groins, and bearing down pains which are increased upon effort by walking or standing, frequent urination, sometimes hemorrhage after intercourse, profuse leucorrhœa, the menstruation irregular—sometimes scanty, sometimes profuse, headache on top of head and at the nape of the neck, neuralgia, melancholia, etc.

It occurs most frequently through the anterior lip, a little to the left, due to pressure of the occiput, in first positions. It is next in frequency double. Laceration of the front of the cervix usually heals rapidly, because it does not extend into the pelvic connecting tissue. If it does, we will have a varico-vaginal fistula.

Laceration of the back of the womb heals rapidly without interference. But when it is torn on the sides, it nearly always requires surgical interference.

### ULCERATION.

Ulceration of the uterus is usually situated upon the neck or mouth, and occasionally upon the lining membrane of the uterus.

There are several forms, the raspberry being the most com-



mon. This has the appearance of granulations of the eyelid, and is attended with considerable inflammation. In ulceration there is always inflammation, the surface becoming hot, tense, red and swollen. The spot which is ulcerated turns dark red; then a crack or fissure appears, which gradually deepens into the ulcer. There is always a discharge of purulent, yellow pus, which, as the disease advances, becomes thin, bloody and offensive, and unless cured speedily terminates in cancer, the most dreaded of all diseases.

There are two great varieties, the hard and soft, and these are divided into at least a dozen varieties, receiving names from the tissue composing them, but carcinoma of the cervix is the most common of all.

**Carcinoma** has for its cause, such predisposing influences as race, the Irish and Germans being specially liable, while Americans are supposed to be free and negroes almost never.

Multiple pregnancies is also a common cause, as are sexual excesses and age. It occurs more frequently between the ages of thirty-five and forty years.

### INFLAMMATION OF THE OVARY.

This is of two varieties, acute and chronic. The symptoms are alike in both, in that there is dysmenorrhœa and pains of a fixed character. The patient is usually hysterical; there is rarely any pain on motion, but there is pain and exhaustion after defecation. The pain is in the rectum, hips and down the thighs; the menstruation is irregular. If both ovaries are affected there is sterility.

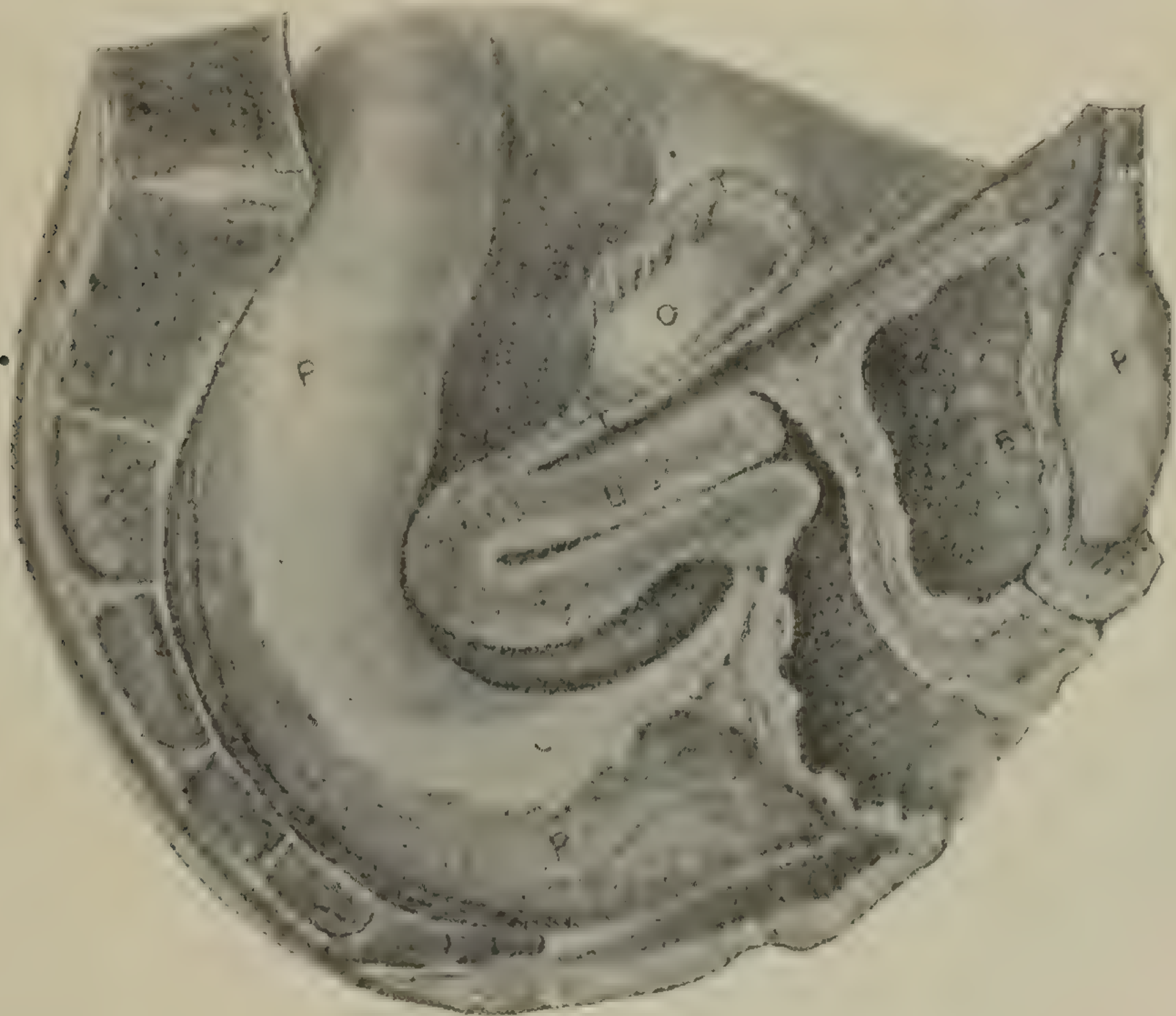
**The Treatment** is not removal, as is so fashionable to-day by a large number of make-money special operators, but rest. Rest carefully, rest from work, a trip to the country, city, seashore or mountains, and then simply rest, and a light diet to remove inflammation and you will have no use for a brilliant operation and you will have more pleasure for your money.

### FALLING OF THE WOMB.

This is one of the commonest complaints of women. Woman will wear corsets, and will persist in allowing herself to have but one or two passages of the bowels a week, and her false modesty



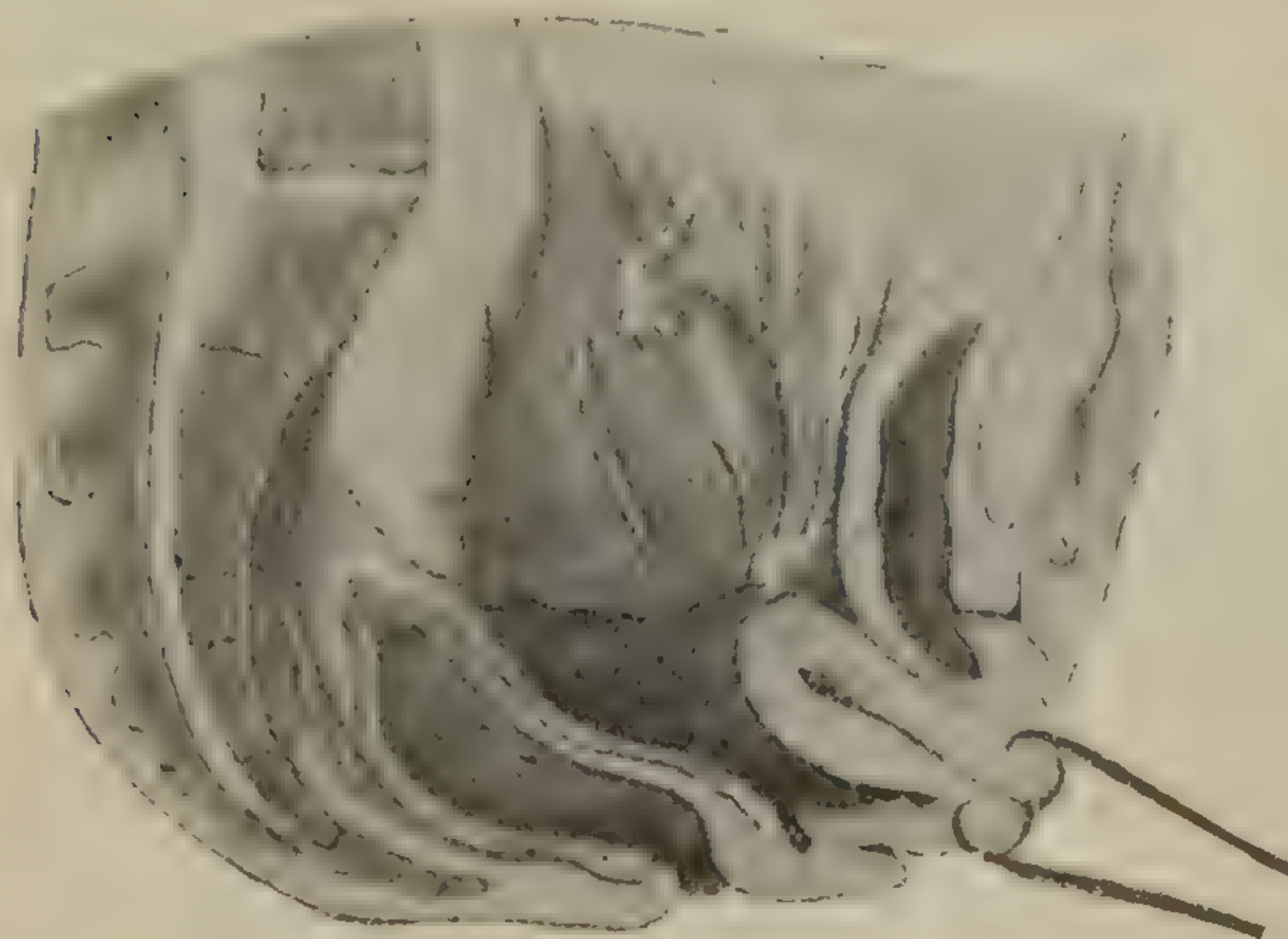
prevents her consulting a specialist, or even a family physician, for her pains in the bowels and abdomen. As a result her uterus becomes permanently enlarged, and increased weight draws the



RETRO-VERSION OF UTERUS

broad and round ligaments tense, and they take on the inflammation already existing in the uterus, and it is but a short time until the woman has stretching and relaxation of the ligaments, and the uterus is allowed to fall in some unnatural position; the patient still fails to see the doctor, and continues in this condition for years, until the inflammation becomes general. Plasma and

lymph are poured out and the uterus is bound down into its unnatural position, where it must remain, unless the adhesion is broken up by some intelligent practitioner, who thoroughly understands his business.



POSITION OF UTERUS IN FALLING OR PROLAPSE.

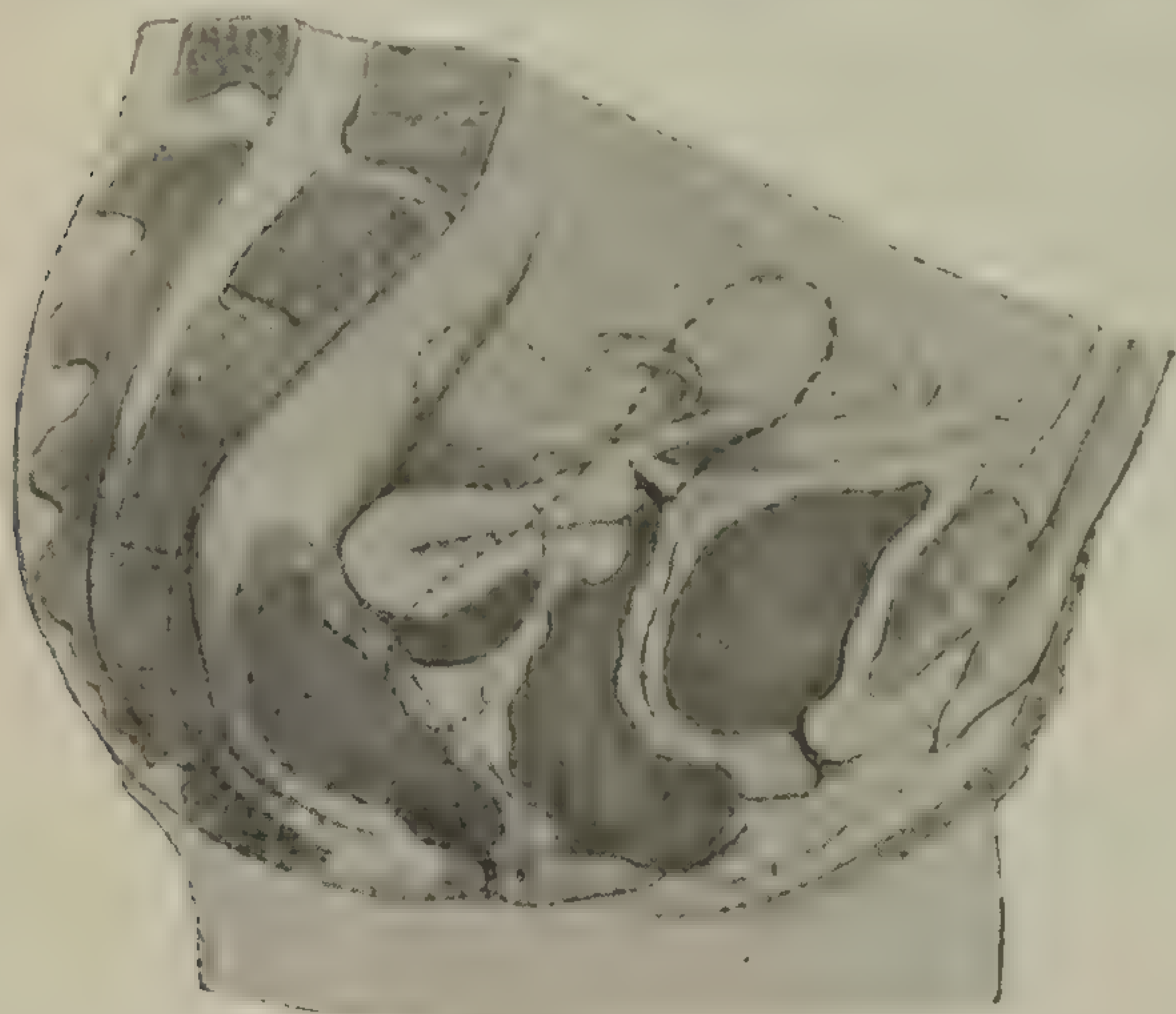
Any variation from the normal position of the uterus which is permanent is called a displacement. The vari-

eties of displacement are: Elevation, descent, prolapsus, ante-position, retro-position, latero-position, ante-version, retro-version,



ante-flexion, retro-flexion and latero-flexion. We mention the names only and will describe the most common shortly, in order that woman may be able to know her trouble and seek intelligent advice as to its proper treatment.

**Ante-Version** is the position in which the fundus lies forward upon the bladder, the convex or neck pointing backward toward the rectum and coccyx. We have already spoken of the causes. The symptoms are a frequent desire to pass water, caused by the



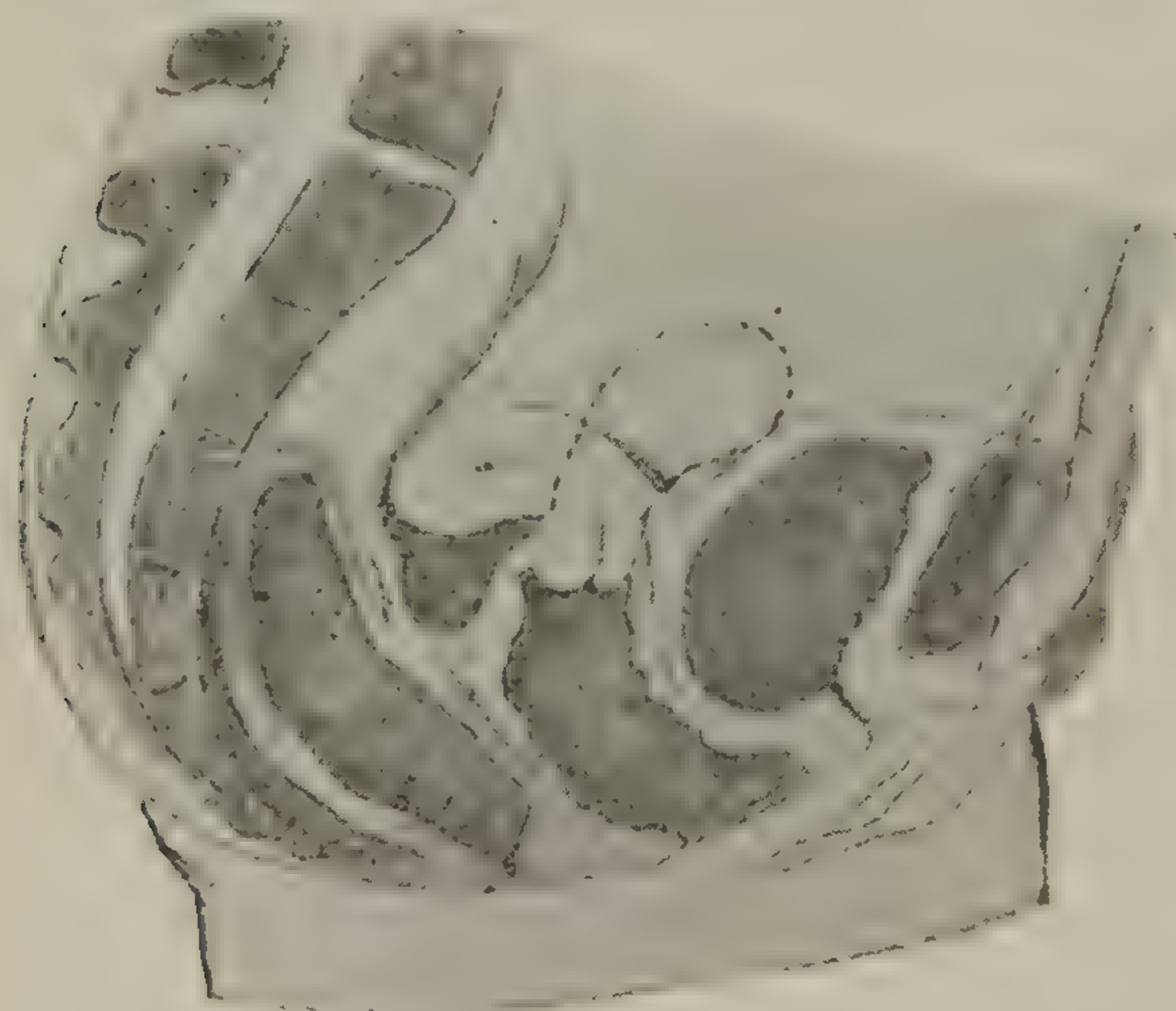
DOTTED LINES INDICATE THE DIFFERENT MIS-PLACEMENTS OF THE UTERUS.

fundus pressing upon the bladder, pains in the loins, back and pelvic regions, tenderness over the lower part of the bowels, headache on top of the head, the patient is nervous, has indigestion and often constipation.

**Treatment** consists of hot water douches, followed by suppositories, composed of remedies to reduce the in-

flammation and size of the uterus. Inwardly, cotton root, ergot and hydrastis to cause uterine contraction, and thus lessen the inflammation.

**Retro-Version** is the opposite of ante-version, the fundus being placed backward, and pressing upon the rectum, the neck pointing forward to the pubic bone and bladder ; the symptoms



ANTEVERSION AND RETROVERSION.

most marked, is the constipation from the pressure of the fundus against the rectum. This is also the same symptom as ante-version, except the irritability of the bladder.

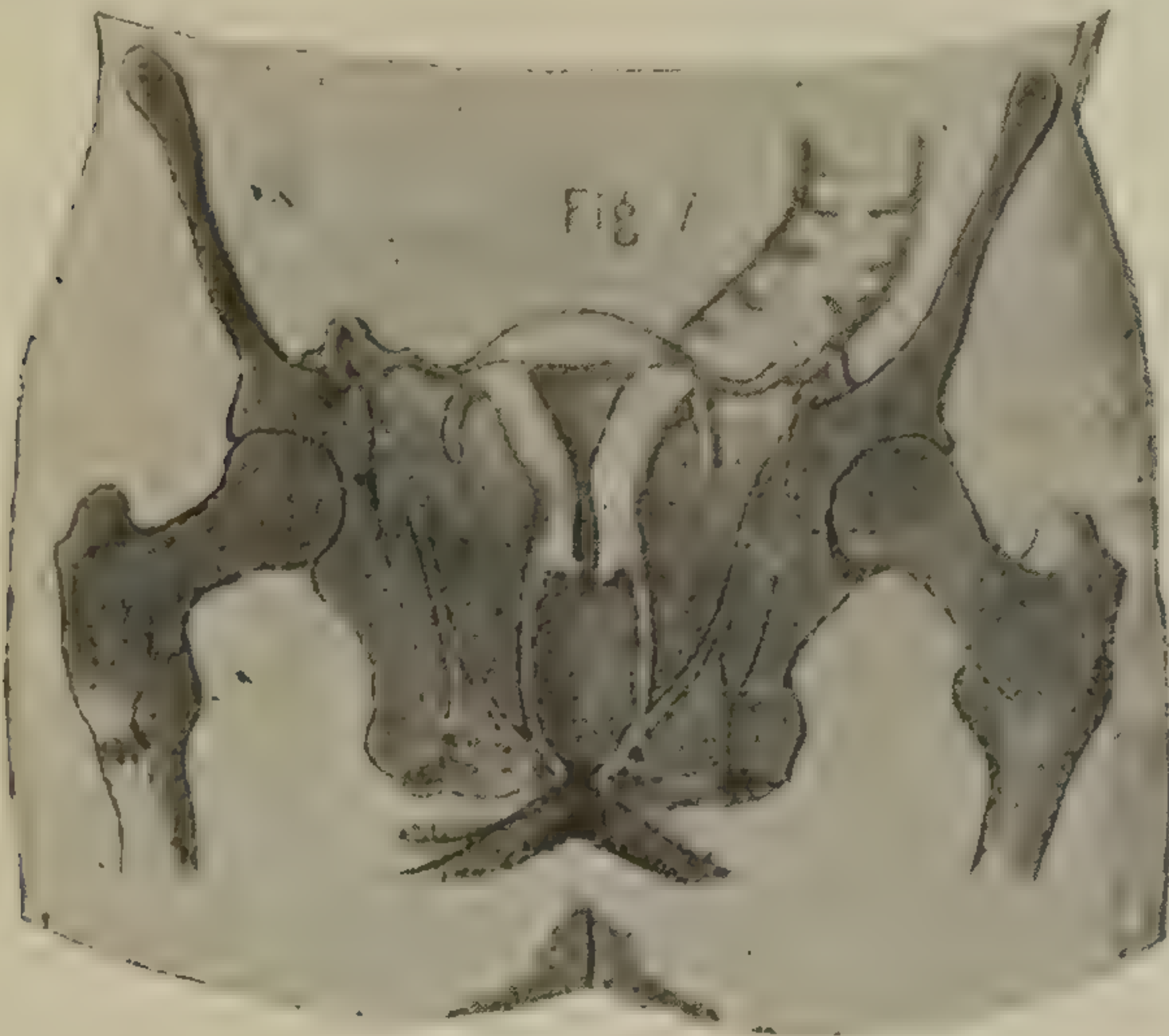
**Flexion**, means bending of the uterus upon itself. Sometimes, this is so pronounced as to have the appearance of a fish hook, or horse shoe, and this bending

may be forward, backward, or sideways, and is called ante-



flexion ; if forward, retro-flexion ; if sideways, latero-flexion. The symptoms are the same as in inflammation of the uterus—all of these being caused by inflammation. The treatment is hot water douches.

The old practice of wearing pessaries can not be too much condemned. There are but few cases where pessaries have re-



PELVIS HALF SECTION. NATURAL POSITION OF UTERUS.

sulted in cures, and there are a number of cases where positive harm has been done. The constant presence of a foreign body causes local inflammation of the walls of the vagina. In one instance, where it was long worn, a cutting operation was resorted to to remove the pessary from the vagina. Most of these cases will get well without pessaries, by reducing the

inflammation of the uterus by the remedies already spoken of in the back of this volume. We also have a formula which gives relief in almost every case, if used with intelligence and care, with dieting, exercise, douches and sleeping in the proper position. The illustrations of versions will give an idea of the positions which should be kept and occupied by the body during sleep. Thus in ante-version, the subject should always sleep on the back ; retro-version, on the front of the body ; latero-version sleep on the opposite side.

**Flexions** are best treated by means of a spring instrument which is softened and bent in the opposite direction, then inserted into the uterus and let gradually replace itself, and worn for three or four days, or for several weeks, or by the flexible sound which can be introduced by any intelligent physician.

## CANCER.

Woman's most dreaded disease is cancer. It may occur at any period of life, from early infancy to extreme old age, and may occur on any part of a person. It is always perfectly local at the commencement and is very easy to cure if treated in its primary state. But when it becomes scattered and constitutional,



it is a terrible foe with which to contend. Cancers are divided into two great classes: one called sarcoma; the other carcinoma. Sarcomas are like tumors and receive their name from the tissues of which they are composed, as, osteo sarcoma, from bone cancer; fibrous sarcoma, cancer of fibrous tissue, etc. They extend by involving the neighboring lymphatic glands. Sarcomas begin by forming a tumor that gradually becomes hard and slowly enlarges, sometimes remaining stationary for years, but sooner or later the glandular system becomes involved; about this time ulceration and degeneration takes place in the original tumor; first, a crack appears that refuses to heal; then, we have ulcer with all the sloughing and foul-smelling discharge that attends cancer. At this stage cancer can be cured, but when ulceration takes place in the lymphatics it is impossible to effect a cure.

Carcinoma, the next variety of cancer is the most dangerous to life as it extends itself through the blood. The majority of persons are greatly deceived in regard to the first symptoms and appearance of this, the most terrible of diseases, considering it to be very painful from the commencement. This is a sad mistake, carrying millions to an untimely grave. In most cases, there is little or no pain until the disease is far advanced. The only symptoms for months or even years are, occasionally, a stinging, darting, stabbing, shooting, burning, smarting, itching, crawling or creeping sensation and, in some instances, not even any of these. A branny, scaly, crusty or warty growth or sore with an occasional exfoliation of the same upon the face, leg, nose or any part of the body, attended with any of the above symptoms, the evidence should be conclusive that your trouble is cancer and no delay should be made in having it cured. Life is too valuable to be tampered with or sacrificed. It is indeed a pitiful sight to witness one of these monsters, fastening itself to some part of the human body and, in spite of the most frantic efforts of friends and physicians, to see it slowly and mercilessly eat its way through muscle and bone until it greedily seizes some vital organ to literally devour it in perfect indifference.

A leucorrhœa, inodorous, or of a mild odor, persisting during the climacteric, accompanied by increasing hemorrhage, is suspicious, and demands investigation.

A leucorrhœa, profuse, of peculiarly fetid odor, grumous, excoriating, appearing early or late during the climacteric, with profuse hemorrhage, is reasonable evidence of cancer of the cervix.



A leucorrhœa, moderate in amount, ill-smelling (the peculiarly fetid odor of cancer of the cervix being absent), accompanied by hemorrhage, suggests cancer of the corpus uteri.

A leucorrhœal discharge, with hemorrhage, containing material like the washings of meat, is said to indicate sarcoma.

A watery discharge as a rule, occurring during menstruation, odorless, or of little odor, persistent, accompanied by profuse hemorrhage, indicates fibroids ; with little or no hemorrhage, polypi.

Profuse bloody discharges, coming on gradually, with declining menstruation, ceasing usually with the menstrual flow, point to fibroids.

Persistent, profuse discharges of blood, occurring spontaneously, arising from sudden exercise or coition, occurring as a rule, after the menopause, indicate cancer.

Cancer of the womb is of more frequent occurrence than physicians generally credit. Women suffering with uterine disease are often treated with the old burning method. The burning by the cautery now takes the place of the hot iron of former days, while others use the more common practice of burning all diseases of the neck of the womb and then heal up the burn. A burn in this position is like a burn on the hands or face. When it heals over, there is a drawing up of the surrounding tissue into a hard cicatrix and this is often the first seat of cancer of the neck of the womb. It frequently happens that physicians when called upon by patients for examinations of the uterus, dilate with metal dilators the neck of the womb. This bruises and injures the delicate structure and in time a cancer is the result. A great many cases of obstinate uterine troubles are but the beginning of cancer and many women are treated for consumption of the bowels, when in reality their trouble is but cancer of the womb.

The treatment of cancer, depends very much upon the variety and its location. The great mistake commonly made by physicians, everywhere, is to cut out every form and variety of cancer. They stubbornly refuse to practice any other method. There is only one form of cancer that cutting cures ; but should they cut into a carcinoma, they aggravate it, and soon the blood carries the disease throughout the system, cancers form everywhere, and the patient dies from exhaustion. It is almost criminal on the part of any surgeon to neglect to acquaint himself not only with the different forms of cancer, but its successful treatment, and



thereby save hundreds of lives. The author makes a specialty of the treatment of cancer ; he will forward to any address, reading matter and books, or will treat such cases as will call upon or write to him.

## TUMORS OF THE WOMB.

It has been said that half of the women over forty years of age have a tumor in some form, but this is a mistake. But tumors do occur frequently enough to acquire at least a general knowledge of the symptoms.

These tumors are classified according to their location. If they are located in the body of the womb they are called inter-mural tumors; if in the sub-mucous tissues, they are called inter-parietal; sub-serous, when they are outside on the peritoneum.

**Sub-Serous Fibroids** begin in the muscular wall, near the outer surface, and grow in the direction of the least resistance. The most common side is the posterior wall, and less commonly it occurs on the anterior wall. But the others are apt to be interstitial or sub-mucous. They may be simple or compound and may have a narrow, long or short pedicel, a large fibroid with a thick neck may draw its uterus up and even stretch it. But they most frequently grow upon the back wall and draw the womb backwards. They may often become incarcerated in the pelvic structures. Adhesion often occurs and the tumor becomes attached to the rectum, bladder and abdominal wall. The fibroid sometimes becomes so stretched as to give way and the fibroid becomes an independent tumor and if the blood supply be sufficient, we find the tumor rapidly increases in size in its new position.

**Inter-Stitial Tumors.**—These begin deeply in the uterine wall, and develop equally in all directions until a bulging of both external and internal surfaces is produced. The tumor is surrounded by normal tissue.

**Sub-Mucous Fibroids** begin in the larger of the muscular tissues immediately beneath the mucous membrane and protrude into the uterine cavity. These usually have a broad thick pedicel, but may have long thin pedicels, in which case they are called fibrous polypi.

**The Symptoms of Fibroid Tumors** are pains, hemorrhage,



sterility. The pains are at the menstrual periods from engorgement of the tumor which acts like a foreign body and produces colicky pains. In inter-stitial fibroids there is colicky pains of a tearing or stretching nature, caused by the pressing of the engorged tumor upon the nerves. In sub-serous fibroids, there is a sensation of dragging and weight, especially during menstruation and there may be peritonitic pains.

The hemorrhage is at first hemorrhagies; the menstruation lasts longer, and at last the woman menstruates three weeks out of four. There is no sudden flooding, but an insidious loss of blood. The blood comes from the congested mucous membrane. The hemorrhage assumes the nature of metorrhagic coats. The mucous membrane over the tumors becomes ulcerated and the vascular capsule becomes exposed. From this there comes an irregular flow of blood. Upon any sudden jumps or missteps hemorrhage is always present.

The sterility is nearly always mechanical, from obstruction or from inflammation of the womb.

There may be symptoms due to pressure, such as portia, or complete retention of urine. Irritability of the bladder, and frequently inflammation from pressure may be and nearly always is in the late stages of constipation from the pressure; there will be pains in the knee joints and numbness of the limbs, with varicose veins and piles, due to pressure of the pelvic veins.

**The Prognosis** varies according to the tumor, but is usually good unless cancerous. As a rule, the growth is always averted with the change of life. It may then become indurated or calcified, and sometimes reduced in size; as the blood ceases to flow to the uterus, the growth diminishes in size. When death occurs, it is usually from the long continued hemorrhage causing exhaustion.

**The Treatment** is the administration of tonics, and support of the tumor by properly adjusted abdominal support. Ergot is the only remedy that will stop the growth of these tumors.

## UTERINE POLYPUS.

This is a pedunculated sub-mucous tumor, attached to the mucous membrane of the uterus. They are usually multiple and vary in size from a pea to a walnut. They are soft and pulpy, are flattened, and are very vascular.



**The Symptoms** of polypi are hemorrhage, pain, sterility, discharge, and the symptoms of weight and pressure. The pain is caused by their presence in the cavity of the uterus, acting as a foreign body, the uterus contracting as if to expel them. In mucous polypi there is usually no pain.

In sterility the polypus acts as a plug and prevents the passage of spermatozoa.

The discharge is little until the uterus enters the neck of the womb, and then it is in the nature of watery and slimy leucorrhœa.

Hemorrhage is the most frequent symptom, the hemorrhage coming from the mucous surface and the polypus itself. A polypus as small as a finger point has caused death from hemorrhage.

**The Treatment** is removal.

## PRURITUS VULVA, OR ITCHING OF THE VULVA.

This is a neurosis or disease of the nerves of the skin characterized by local or general itching of the skin. It may occur at any age or in either sex. It is usually accompanied and caused by some internal disturbance, such as granular liver or Bright's disease of the kidneys, pregnancy, disturbances of menstruation, etc. Pruritus anni is often associated with pruritus vulva. The itching becomes most unbearable at night when the patient becomes heated by the bed clothing. Most English writers attribute nymphomania and onanism to this disease.

The treatment of pruritus will often exhaust the skill of the physican. The cause should be carefully sought to see if there be neurasthenia, diseases of the liver or the kidneys. The diet will be found to aid in the general treatment of these troubles. The patient should avoid all rich pastry, pepper, tea, coffee, and especially sugar, and the different articles of diet manufactured from wheat flour. Bathing and exercise are also very beneficial.

Drugs should be applied for the purpose of effecting a cure of the exciting disease, thus in disorders of or delayed menstruation, the viburnum compounds should be administered. The *dio viburnum* of the drug stores will aid very materially in curing the above. In diseases of the liver, the fluid extract of *chionanthus*, *podophyllin*, ox gall or dandelion will be found beneficial.

Diseases of the kidney are best treated by such remedies as *rhus aromatica* in two or three drop doses, three times daily, or



lithiated hydrangæ in teaspoonful doses. The bowels should be kept regular and the kidneys acting.

**External Treatment.**—The plain vapor baths or the application of hot or cold cloths, or douches will sometimes relieve. The baths can be medicated by a solution of bicarbonate of sodium, or carbonate of potassium, or a solution of borax or sulphur. Chloroform and alcohol applied locally sometimes gives relief, but this is too strong to be used for any length of time. Ointments containing carbolic acid give the most relief.

Tar preparations are highly recommended; one of picis liquida, two ounces; caustic potassa, one ounce; water, four ounces, mixed. This diluted with water and applied three times daily, is in use in European hospitals. Oxide of zinc ointment with a little carbolic acid added is the best remedy in pruritus anni, and it is easily obtained in almost all country drug stores.

## LEUCORRHŒA OR WHITES.

This is a thin, milky-white, or greenish, watery discharge from the genital organs of the female, and is a result of some chronic inflammation of some portion of the vagina, uterus or tubes, and is but a symptom of disease. It has been classified into vaginal leucorrhœa, cervical and intra-uterine, according to the parts affected. Leucorrhœa of an opaque white character, at times giving the appearance of curdled milk, and very acrid, comes from the vagina. Leucorrhœa from the cervical canal is of a tenacious and mucoid character, representing the white of a cooked egg, alkaline in reaction, and extremely adherent.

**Intra-Uterine Leucorrhœa** is glazy like the white of an egg, and when coming from the upper part of the mucous tract is quite liquid. When it becomes chronic the discharge becomes quite purulent, streaked at times with blood, and is very offensive when it accumulates in the vagina and is retained for a time.

Leucorrhœa that is offensive, watery and streaked, with blood beef washings, occurring in women of thirty-five to forty years of age, indicate cancer of the cervix or body of the womb.

Leucorrhœa of children, is supposed to be caused by uncleanliness, masturbation, worms, cold, gonorrhœa and rape. It is an affection of the mucous membrane and is similar to ophthalmia. Neonatrium, a disease of specific character causing a similar inflammation when applied to mucous surfaces in others.



This is contagious in most cases, although leucorrhœa occurs periodically in children just previous to menstruation, and appears about the same time as a menstrual discharge, and is not contagious.

The treatment depends greatly upon the cause and location of the diseased membrane. In general, it will be found that all women who have suffered from leucorrhœa have a pale, tired and anaemic appearance, a condition indicating great drain and loss of substance. To correct this, it will be found that a generous and easily digested diet will aid materially in the treatment. Secretion and excretion should be attended to, bowels and kidneys kept regular and acting. Fresh air and exercise are also of very great importance. Also massage, electricity and forced feeding.

The medicines usually prescribed are arsenic, in the form of Fowler's Solution, three to five drop doses three times daily, or the elixir of gentian and iron, teaspoonful doses before meals, will aid digestion and improve the blood generally; or ergot and cotton root in teaspoonful doses, three times daily.

One of the best treatments is to have the patient throw away her corsets and the bands that bind her dresses, adopting the improved dress holders, shoulder straps and what not, but remove all compression, as compression of these organs means congestion, irritation and enlargement. The only way to remove these is to remove the causes. Hot vaginal injections with plain or medicated water, and removing the decaying and offensive discharges and aiding in cleanliness, will not only aid in giving comfort, but will help to cure the disease. The Hot Springs of Arkansas, Eureka Springs of Nebraska, St. Catherine Springs of Canada, and many others of known value, aid in curing these troublesome discharges, by giving the patient a rest and change of scenery and habits, and causing her to run about, climb and take more exercise generally, thereby increasing appetite and improving nutrition.

Medicines, used locally, are such remedies as are intended to act upon the uterus and vaginal membranes in such a way as to alter the character of the secretion. But, as a rule, they give but little relief, most of them being astringent, pure and simple, they simply act by drying up the secretion for a time. However, they soon lose their usefulness and the disease returns worse than ever. Tannin in the form of white oak bark is one of these



astringents, alum and sulphate of zinc, or sugar of lead, act in the same manner.

There is no practice which should be more strongly condemned than that of a physician painting the cervix, vagina and even the entire uterine surface with a strong solution of nitrate of silver, tincture of iodine, carbolic acid, iodized chloral and such other strong solutions as are painful. At best they only increase the inflammation and very seldom do the least particle of good. But there is a local treatment that women can use with safety, and entire confidence; it is the compound of sweet brier and other healing drugs. These are applied direct to the inflamed surface and let remain, thereby having the influence of a local remedy and a general system tonic. These can be obtained at the drug stores or will be sent on receipt of \$1.00.

**Treatment of Infantile Leucorrhœa** is very similar to that of the adult, with smaller doses. The local treatment consisting in vaginal injections of warm and hot water, followed with applications of boracic acid powder, or boracic acid and iodoform equal parts, or the use of ointments of the oxides of zinc applied two or three times daily. Should these means fail, it is best to call in some reliable specialist.

## GONORRHOEA, OR CLAP.

This is an inflammation of the vagina, uterus, fallopian tubes or urethra, affecting both males and females, and is caused by impure sexual intercourse, or by direct contact of the gonococcus to mucous surfaces. It is very contagious. Pus from a gonorrhœal case, applied to the edge of the eye-lids, will set up a purulent ophthalmia, or to the urethra of the male or female, it will set up a specific inflammation, which will be characterized by the following :

**Symptoms.**—In the female urethra, within a day or so, and no later than the twelfth day, there will be burning heat and throbbing in the vagina. Sometimes the pain will be severe in the pelvic organs, with a bearing down sensation, with or without smarting on urinating. There will be a leucorrhœa of an offensive, purulent, or glazy character. At the vulva, there will be burning and excoriation. There is a sense of weight in the lower part of the body and the perineum, with a frequent desire to pass water. The mucous membrane is at first hot, then dry and swollen.



and within twenty-four hours there is an acrid discharge, which becomes rapidly purulent and excoriates the vulva. If the disease extends to the uterus, fallopian tubes, or urethra, all the symptoms become aggravated, the pelvic pains increase, the vagina and vulva are swollen, the abdomen is tender upon pressure, with great pains in urinating or at stool. There may be bubos in the groin, or the presence of gonorrhœal warts upon the vulva. The treatment consists in putting the patient to bed on a low diet, and the administration of saline mixtures internally. Irrigating vaginal injections of corrosive sublimate 1 to 1000, repeated every three or four hours to prevent the spreading of the uterus. It is best to paint the neck and the mouth to the uterus with iodized phenol, in the strength of forty grains to the ounce of carbolic acid, which should be followed by swabbing out the entire surface of the vagina with a solution of nitrate of silver, strength, forty grains to the ounce. Then powder the surface with iodoform glycerine and chloral solution. Mild cases get along very well with a wash of boracic acid and water, or a solution of sugar of lead, or sulphate of zinc. This should be used four or five times daily.

### STERILITY RESULTING FROM SYPHILIS.

Next to consumption and cancer, syphilis is the greatest enemy of mankind. It has no preference; its victims are counted among the millions of every race. It is common in all countries, and in all parts of the same country—the rich, the poor, alike suffer from its ravages, and when it once becomes established in the blood of an individual it is probably never cured, although treatment holds it in check, allowing the patient to remain in a state of health that is nearly or perfectly normal for years, and thus after a period of thirty or forty years, it will manifest itself in the process of reproduction; or the patient may develop an ulcer some place upon the body, or some chronic skin disease may break out and refuse to become healed. Many of the great men, leaders of the world, have suffered with syphilis, been cured, and then later in life died of paresis, or some result of chronic syphilis. Syphilis often begins without any symptoms to speak of, but usually upon one of the labias or upon the neck of the womb a hard lump which feels as if there was a pea under the skin. This occurs about the fourteenth day after an impure connection, but never later than the fortieth day. In a short time, a week or



longer, there may or may not be swelling of the groins. If the lump is chancre the swelling will be on both sides of the groins. But chancre often comes from kissing a syphilitic by contact with a patch or ulceration of the mucous surface of the tongue or lips. In that case the swelling will be under the angles of the jaw. This is called primary syphilis. Secondary syphilis follows in about one month or six weeks. It is characterized by small eruptions upon the skin, pimples or coppery spots, the size of a pea or dime. The hair often falls out in spots leaving the patient with the appearance of leopard's skin. The spots may come upon the palms of the hands and soles of the feet and syphilis the only disease that causes these surfaces to become ulcerated. This stage lasts about five or six weeks or longer when tertiary syphilis begins. It affects all the deeper structures of the body. The bones become ulcerated, the skin ulcerates in large patches, the brain has deposits of a gummatous substance called syphilitic gummata. The patient has little or no pain, simply complains of bone aches at night, at first they are melancholy, but later there is no pain except that from some ulceration. The appetite is good, the bowels regular and other ways there is but little inconvenience from this disease. When it manifests itself in the reproductive process, the father being diseased and the mother perfectly healthy, the ovum containing the new life is received in the form of a diseased spermatozoa from the father, (who was supposed to have been cured years before) in the impregnation process, and there is sufficient of the venom to mark the foetus with some evidence of syphilis. In such a case, though the mother may never have contracted the disease direct from her husband, yet the infected foetus may communicate to her sufficient of the poison to influence, if not her own body, it will surely cause disease in a succeeding ova. Then again, the woman may have been affected years before with syphilis and remain free from all symptoms, and then become impregnated by a perfectly healthy male, yet the disease will nevertheless surely be marked in her offspring.

The local manifestations of an attack of syphilis may be destroyed or entirely healed up in either or both parents. There may not be the slightest manifestation of syphilis for years, yet the child will manifest some constitutional disease, the outcome of syphilitic poison.

Where sterility is persistent and cannot be traced to any im-



potence on the part of the male, or any malformation or lack of development on the part of the female, syphilis may be suspected and sometimes a mild syphilitic treatment to both male and female will result in impregnation to the great satisfaction of both the parents. In chronic diseases, when the system fails to answer to tonics, change of climate and surroundings, the trial of mercury in the form of green iodide, persistently administered, will give the very best of results, indicating that there is syphilis in some of its forms present. It was this successful use of mercury in the treatment of syphilis and of all chronic diseases that led the ancient practitioners of medicine to prescribe calomel for all ailments and complaints.

When women form the habit of aborting successfully without any apparent cause, or from the existence of chronic uterine diseases or over-taxation, or from any cause, that ordinarily leads to miscarriage, a concise syphilitic treatment will relieve the symptoms and prevent the occurrence of a miscarriage, thereby revealing the true cause of the mischief. Syphilis being more obscure may produce death of the foetus late in the intra-uterine life, and in such cases a careful post-mortem examination of minute particles of the liver and other organs, by a microscope, will reveal the cause of death and at the same time indicate the necessity of the administration of syphilitic treatment to the parents.

The child may be born alive and may be perfectly healthy, but after a time, possibly within two or three weeks, often five or six, or longer, unmistakable signs of syphilis will show themselves. In such cases the treatment of both parents will result in perfect offspring. Obstinate induration or ulceration of the cervix or other chronic diseases of the neck of the womb is often the result of syphilis and will not yield to treatment, unless a course of mild mercury be instituted in conjunction with the local application of the diluted acid-nitrate of mercury to the cervix.

In fact, any chronic condition of the vulva and the orifice of the vagina, or of the urethra producing stricture, are of rare occurrence, but nearly always are of syphilitic origin and in all cases where syphilis is suspected, the treatment should be under the care of a special physician.

## LEANNESS.

Leanness means wanting in flesh, or absence of fat. It is a disease of nutrition. The causes are predisposing and exciting.



Predisposing causes are hereditary. Great mental and physical activity ; hot and dry climate ; sometimes excessive eating and drinking. Exciting causes are chronic diseases, such as catarrh, dyspepsia, kidney and liver diseases. Prolonged mental anxiety ; excessive muscular activity ; nervous and mental diseases.

**Symptoms** are absence of fat in nearly all tissues except around the eyes, according to length of time disease has existed, pale, sallow, or yellow complexion ; liver spots on face ; muscles flabby ; generally a feeling of unrest ; easily fatigued, or feeling as of nothing too great to accomplish, but soon relapsing into a condition of excitement ; patient gets easily rattled ; is subject to anæmia chlorosis. Women have dysmenorrhœa, amenorrhœa, and uterine troubles ; generally they are subject to cancer, scrofula and consumption ; some have diarrhœa, others constipation, or they are on account of the tendency to nervous diseases, subject to hysteria, mania and melancholia.

## OBESITY.

Is a condition of excessive deposit of fat. Causes are predisposing and exciting. The predisposing causes are hereditary. Low mental development ; low moist and cool climate. Women are more disposed to it than men. Exciting causes are excessive eating and drinking ; hemorrhages of different kinds ; convalescence from long sickness, deficient sunlight, etc.

**Symptoms.**—In some cases, large deposits of fat are accompanied by a muscular development ; the action of the heart and lungs are less taxed than usual, allowing the fatty substances to be deposited as tissue. There is a diminution of the sexual appetite ; impotency and sterility are usual ; the uric acid is not eliminated, and as a result, we have dizziness, rheumatism, and kidney troubles, developing from the accumulation of uric acid ; the liver, kidneys, heart and other organs take on fatty degeneration ; causing palpitation, dyspnoea, shortness of breath upon the slightest exertion ; these, with the increased bodily weight, are the symptoms most common. Death results from rupture of the walls of the heart, or from rupture of the arteries of the brain. The prognosis as to longevity is bad. Death may occur without a moment's warning from syncope, (dizziness or fainting), due to oppression of the heart by the weight of the excessive fat, and from arterial degeneration allowing rupture.



**The Treatment** is dieting and exercise, but there are medicines which act as specifics in building up tissues, such as chloride of gold and arsenic in small doses, long continued. To reduce the flesh, there is nothing better than iron, iodine, tincture digitalis, jallap or scammony, in sufficient doses to cause watery evacuations.

**Diet and Hygiene for the Obese.**—Take a walk of one mile each day, fast enough to cause sweating ; rub the arms and limbs hard enough to cause redness, morning and evening ; take cold baths two or three times each week, and as much muscular exercise as possible. See that you have at least one passage of the bowels each day, and attend at once to all of nature's calls. If you are constipated, use in connection, one box of French Lick Tonic.

**Avoid** all fatty meats, such as pork, possum, goose, kidney, liver, and farinaceous vegetables, such as oatmeal, cornmeal, sago, rice, tapioca and arrowroot ; saccharine vegetables, such as turnips, carrots, parsnips, green peas, beet root ; all preserves, syrups, sugars, cocoa, chocolate, cordials, sweet wines ; all pastry, puddings, ice cream and honey.

**May take** all kinds of fish, oysters, clams, lobsters, shrimps ; all kinds of lean meats, poultry, game, veal, beef and eggs.

**Farinaceous Articles.**—Dry toast bread for breakfast, bread and biscuits made with bran ; bran, one pint, wheat flour, three table-spoonfuls ; egg and milk, soda or sour milk ; dry, in gem pans, or make like corn bread.

**Vegetables.**—Rice, green vegetables, such as cauliflower, oyster plant, summer cabbage, turnip tops, spinach, water cresses, mustard, sauer kraut, lettuce, sorrel, mushrooms, celery, string beans, tomatoes, dandelion, chicory, cold slaw, brussels sprouts, cucumbers, asparagus, truffles, radishes, onions, greens, pickles, lemons, oranges, acid fruits.

**Desserts.**—Custard without sugar, jellies, nuts of all kinds, except chestnuts ; currants, stewed cranberries, sweetened with glycerine.

**Drinks.**—Limited to three pints daily ; light and sour wines, as well as tea or coffee, without sugar or milk.



**Avoid** all whiskeys, beer, sweet wine, porter, ale, etc. By doing without supper, a more rapid reduction will follow.

Use in connection, one bottle of Dr. D. E. Barnes' flesh reducer.

### NEURASTHENIA.

Neurasthenia is a condition of exhaustion of the nervous system. It occurs at a time of life when anxieties and work are in full operation.

It is caused by too prolonged and anxious work, excesses of all kinds which lower the vitality. In women it is caused by petty annoyances, cares, too rapid pregnancies, drain from nursing children, profuse discharge of blood and many exciting diseases.

**The Symptoms** are inability for exertion; the patient is easily fatigued; has no ability to do mental work; gets confused and complains of headache on the least effort; pains about the head and body; sensation of prickling and numbness of the limbs; head and neck tire easily; tender and painful spots along the spine; sleeplessness is common. The patient becomes anxious, easily excited, dread of something terrible going to happen, fear that they are going to loose their mind, occasionally the heart beats rapidly, at times they wake up in the night with palpitation; they sweat easily, flush at the face, have chilly sensations up the spine; they imagine they have change of life; they dislike to do any mental work; get confused and dizzy, and have a constriction or band-like feeling about the head; pains on top of head; have dyspepsia, tenderness in pit of stomach; they are pale, anæmic, the spirits are depressed, the mind wanders, paralysis sets in, and complete mania or melancholy is the end of these poor sufferers unless speedy relief is obtained.

**Treatment of Neurasthenia.**—Change of climate and surroundings is of great importance; a few weeks' rest away from home or in the mountains or at the sea shore with a few good tonic remedies and good out-door exercise; plenty of good, easily digested food, and most of these patients will get well. Persons living in malarial countries should use the compound tincture of cinchona or Fowler's solution of arsenic combined with pepsin or hydrastis.



## COCCYGODYNIA.

This is a painful affection of the muscles, tendons and nerves of the coccyx due most frequently to child-birth, but may be caused from injury; it is often rheumatic and sometimes a symptom of uterine disease.

**The Symptoms** are pain in the end of the spine, inability to rise from a sitting posture, due to stretching of the fascia, painful defecation, painful coitus, pain in walking and in sitting down. It is easy to recognize by pressing the coccyx from the outside; the pains will be immediately felt.

**The Treatment** is always to remedy the cause, cure the uterine inflammation, or when due to rheumatism treat that. Sometimes the only remedy will be an operation.

## THE VALUE OF A HUSBAND'S AFFECTIONS AND HOW TO RETAIN THEM.

The happiness of married life very much depends upon the amount of affection the husband has for the wife and the amount of love that the wife experiences for her husband. At the time of marriage, she thinks that she loves him greatly, but a few years of married life will convince her that she simply began to cultivate that love.

Love is like a plant, it requires constant care and cultivation. A few seeds of kindness sown in fertile soil, branches into admiration, blossoms into affection and ripens into love when properly cultivated, but a little neglect, and the first frost will chill it to nothingness.

Young wives, you should learn that although your husband in his sacred promise vowed to love, cherish and protect you, will soon forget that it is a duty he owes to love.

This love plant is yours; you bought it with your own heart, but in order to keep it you must continue to daily cultivate it and feed it with your own love. Begin early in married life, and set a time each day to enjoy your husband's company. Evenings will be found to be the most suitable, for then he will be found to be most at leisure, for he will be free from business cares. Pleasant amusement at home, such as whist, checkers and innocent pleasures, attended occasionally with lectures, operas, etc.,



will not only increase your devotion to him, but insure you his love in return. Men stay near their loves.

If they love billiards and the club more than their wives, they will be found at the club. You will soon learn that men are stubborn things and will not be forced, but loving women can persuade, coax and entice a husband to do almost anything, but the more she drives and scolds, the more he will resist.

Those who have club loving husbands will do well by making self and home more attractive. Meet him at the door with a pleasant smile, have his warm slippers and an easy chair ready for him, and make yourself agreeable and wait on him, and he will soon neglect his club for you.

Thanking a husband pleasantly and even coquettishly for all favors he grants you, is a good way to inspire him to bestow more. Receiving such favor in a cold indifferent air, or a manner expressive of your aught, will soon kill his love and courtesy.

**Men love sweetness in women** and hate crossness or fretting over troubles in them; and often it aggravates, and at the same time, spoils your disposition, which in time will alienate your husband's affection. Men may pity their irritable, irritating, fussy, fidgety wives as they would a sick child, but they soon lose their love for them. Just such wives are an abomination to all husbands.

"Laughing is catching," is a good motto for a wife to follow. There is nothing cheaper than a good wholesome smile; it cheers up the husband and warms up the home; turns away wrath; improves temper; promotes love, and will do much toward keeping your husband's affections at home.

Keep your softest, sweetest voice and manner for your home. There is nothing that will encourage a man's love of his wife so much as a pleasant, sweet, soft-voiced, easy-mannered, good-tempered woman. A soft voice will give far more happiness and make home more pleasant than any other single gift.

Never sulk. A sulky man is bad enough, but a sulky woman is despicable. Be a queen of the kitchen. You may be fortunate enough to hire your cook, but see to it that everything is well cooked, and that everything in the dining room is spotless and clean.

One of our modern writers always speaks of Josiah's being hungry and all stomach.

Another writer has said: "The way to reach a man is through



his stomach." There is much truth in this; see to it then, that his stomach is kept well filled and that his digestion is good. A sour stomach will sour his temper and disposition as well as yours.

**Tidy Housekeeping** is another way to prove to your husband that you are deserving of his love. There never was, and never will be any real, sincere love of long duration in a man towards a dirty, filthy mate, although some men can live in peace and harmony with a dirty woman. Filthiness of person is as bad as a filthy house.

Men, although dirty from their business, will love a woman who is clean in person as well as in her house, but can have no affection for a filthy mate.

Remember that "Cleanliness is next to Godliness," and cleanliness in dress will not only insure cleanliness in house-keeping, but will form a general habit of cleanliness, both in yourself as well as in him; then if you are clean it will reflect in him. A white or yellow cravat or shirt on a man, speaks at once the character of his wife. See that your dress fits you and is not taggy or fringy and does not hang one-sided.

Look well in your shoes, for a man will look at a woman's shoes oftener than at her face; therefore, do not have them one-sided, run down at the heel, soles worn out, ripped and all red for the want of polish; polish is cheap, and when used, gives an aspect of neatness, as well as cleanliness.

Shoes speak as much for a woman as her dress. If her shoes are slip-shod or one-sided, everything else will be the same way.

**Order** is a first principle of happiness in a house where nothing is at hand, and nothing is done on time. There is a perpetual sense of dislocation and discomfort which ruins all thought and happiness; the children get cross and fretful, the husband becomes impatient, peevish and sour, and everything is out of joint and there is no harmony anywhere. Want of order is a great destroyer of love. When you can not have what you want, and when nothing is in the place it should be, how can you expect your temper to keep sweet, and when you lose yours, every one else loses theirs, and the result is an old fashioned family row.

Women do not know how much depends upon these comparatively small matters. Husbands say little, but think much, and they will envy their luckier neighbors.

**Frugality** in a wife is greatly prized by a husband, as it



makes his burden lighter, and lays the foundation for the home, but stinginess, a pinching of the stomach, skimping of dress, is as much despised by men as frugality is prized. Many men have been ruined and degraded by the extravagance of their wives, while others owe their vast fortunes to the advice and assistance of frugal wives. Men make money, and women should have it. This will apply as much to those who have plenty, as to those in moderate circumstances.

**Do not be a Fault Finder.**—There is no woman who cares to have her husband forever finding fault ; then if fault finding in the husband is bad, how much worse in a woman ? An everlasting fault-finding, complaining woman will soon lose the love of her husband, and she will deserve it. Fault finding shows a lack of patience and a want of sense and coldness or indifference is worse.

All men like warm, affectionate women, who will affiliate with, and make common cause, confiding in and helping in the daily affairs of life.

**Melancholy** in wives is not greatly appreciated by husbands, nor by the world in general. No one cares to hear the trouble of others, but laugh, and they will laugh and be merry with you. Some wives are misery-makers. They are not only miserable themselves, but delight in making others as miserable as possible. They are always unhappy about something, either past, present or future, and borrowing trouble. This is very painful to most men, frequently driving them to seek merrier company. If you are afflicted with this disease, get an arm full of children, that will give you something to think about ; but if not yet in want or some real genuine affliction, some real trouble will cure you quicker than anything else.

**A Bad Breath** sometimes arises from neglect of teeth, and sometimes from diseases of the stomach and lungs. A man with delicate olfactories is almost forced to hold at arm's length a wife with a fetid breath.

**Prespiration** of the feet and arm pits is very disagreeable and you will do well to get this cured, as fetid feet are at times so horribly offensive, that it is sometimes a good and valid cause of divorce. Men are naturally tyrannical, having no other victims, often lord it over wife and children, whereas, she being exceed-



ingly rigid and pertinacious, insists that he shall conform to her standard. It is then you should remember that toleration is the first law of love, and a want of it may cause a breach that will only be healed in a divorce court.

A splendid rule to follow with a newly married couple, and it will apply to those who have been married for years is when one gets angry, the other should try to get pleased, or at least to keep cool. Two angry persons will often get up a collision, which will result in somebody getting hurt.

**Love Seeks the Happiness** of its object, as sure as water seeks the level, and as this is true, just try to love your husband and he will in return try to love you and in proportion to the amount of your love will be your happiness. Try to render him happy and you will thereby compel him to love you. He cannot help himself and will not try to, yet every tinge of pain you give, will engender his dislike just that much.

Beauty is but skin deep, and as "Beauty is as beauty does," it will be well to do beautifully towards your husband. No woman can be blamed or despised for her plainness. The truth is, plain women often make the best of wives. The handsomer the woman, the more male admirers she will have and her husband will be a henpecked nothing or a fool; he will be continually jealous and again, beauty is greatly a matter of taste and can be acquired by art; you will have read in the preceding chapters what men admire in women, and you can examine yourself and if you find yourself lacking, it is but a matter of time to cultivate and make yourself more attractive. You already possess some superior charms or you would not have been married; therefore, there cannot be a great deal lacking to make you beautiful at least to your husband.

**Jealousy** is a cause of much unhappiness on the part of the husband and frequently it is an inherited complaint that will require all your care and tact to overcome. You may be as pure as an angel, but unless you are as cold as an icicle to all other men, it will be almost impossible to overcome this delusion. Men when suffering from this disease, distort and enlarge upon even the simplest and most natural action, until it becomes a mountain. Then be careful of your every action when in the presence of your husband, lest he become afflicted with the disease so fatal to the happiness of the married.



## SEXUAL INDIFFERENCE.

Sexual indifference on the part of the wife or the husband is one of the commonest causes of unhappiness among married people. Coldness or indifference may be simply an absence of desire or a want of feeling resulting from paralysis, or it may be that there is an intense aversion to sexual connection. In such a state as this there is usually no amative emotion whatever, and when required to yield to the conjugal embrace, there is an expression of hatred toward the partner, or at least a feeling of disgust. Females when afflicted in this manner imagine they are more chaste and pure than others, and often speak of their coldness in a bragging way. They should be pitied, as they are suffering from a delusion which the well-informed should endeavor to properly instruct in the cause and cure of their complaint.

The causes of coldness are disease and non-development of the generative organs, prolonged continence of single life, and uncongenial matrimonial alliances, uncleanness in one or both by giving off unpleasant odors. Relaxed or a flabby condition of the vagina is often a common cause in females. Women more than men marry for position, home and money. It sometimes happens that a young girl of eighteen or twenty will marry a man of sixty or sixty-five. Love sometimes is the cause, but more often position in life. It is, therefore, not expected that a young wife would welcome to her arms a man old enough to be her father. Even if she should welcome the old man, her young and amorous disposition would soon cause over-stimulation and paralysis in him, which is sure to react and lessen their pleasures, and in time there will be no pleasure, but on the contrary she must soon experience a feeling of disgust at having to yield to an embrace which at best only aggravates and does not relieve.

Prolonged mental strain or work in either sex is a cause of a want of desire. It has been said that one of our greatest inventors, at the time of his marriage, left his bride as soon as the ceremony was performed and went to his work shop, and was absent two or three days, and when found he had on his wedding suit, which was all besmeared with grease, while he was lying upon a bench fast asleep, forgetful of his bride. Priests are compelled to remain single, and their study must take the place of the companionship of women. Students of different kinds, who study



for examination, are usually impotent during this time, and remain so for some time afterward.

Leucorrhœa is a common cause of sexual aversion in women. The discharge changes the vaginal secretions also.

Incomplete development of the clitoris is a cause of indisposition. In such cases the clitoris is too small and the nervous supply is incomplete and the elastic tissue is insufficient to cause an erection, and unless an unusual amount of stimulus is used, the sexual act will be merely mechanical.

Diseases of the ovaries, of the uterus or vagina, causing painful congress or absence of sensation to the female, is the cause well known among physicians, but one which is easily remedied. Prolonged continuance and disease of the sexual organs often produce apathy in women, but not in men. Nature provides the female with a ripened ovule every twenty-eight days; but she has also provided an avenue of escape for it, and unless it is impregnated by a successful copulation, it is passed off in a regular monthly discharge. Therefore, unless she is stimulated by a strong magnetic influence and exercises these muscles, they will become as much paralyzed as an arm which is carried in a sling for months. This is not the case in men, as nature has provided organs that manufacture life fluid continuously, which is stored up in the seminal ducts until they become enlarged, and unless friction or intercourse takes place the pain becomes unbearable. Hard labor, either mental or physical, may use up this surplus.

Masturbation is a cause frequently met with.

Want of adaptation is another source of sexual indifference. One person can excite desire in an individual, while another one cannot. An excessive development or enlarged condition of the male organ, or an undeveloped male organ, or an unusually nervous temperament existing in the male, causing the crisis to take place too soon. Disgusting habits or associations or surroundings sometimes cause the condition in the female as well as the male.

Whenever there is sexual apathy in the wife, cohabitation will be injurious to the husband.

**The Treatment** consists in removing, as far as possible, the causes. If it has been brought about by too often indulging, a temporary separation will be found of service. Those who are uncleanly in their habits should be more cleanly. When there is a want of development, care in exercise stimulates, horseback riding



being recommended. Stimulating applications to the vulva are beneficial. For this purpose a liniment, to be well rubbed in, does good. Sea air and bathing in salt water is also very beneficial. Medicines consist in good nerve treatment. Elixir of phosphates and iron, or damiana, saw palmetto, or drop doses of Fowler's solution of arsenic, or the chloride of gold, will in most cases result in a cure.

### JEALOUSY OF WIFE.

When you are married and there is some one to whom your husband is very attentive, do not get angry, but above everything, keep cool, and if possible, suppress all appearance of distrust, or displeasure. Ask your husband to have her call, or send an invitation to her yourself, and if the invitation is unheeded, it will be well to take pains to form her acquaintance. If you are not already acquainted, cultivate her acquaintance ; form all sorts of excuses to drop in on her ; keep this up, no matter if your calls or attentions are unheeded. Try to be an associate at least, if not intimate ; but never let her know your motive in so doing. If she is a person very much below you in social standing, even if she is one who has had the tongue of scandal assail her, even if she is a courtesan, and you are asked by your fashionable neighbors why you associate with her, you can gaily say that she is a friend of your husband, and that he seems to be very much attached to her and that you associate with her on his account. This, you say, will be very hard to do, but it will result in one of two things ; either he will be ashamed of the position in which he finds himself and will hasten to cut her acquaintance, or if he has the least respect for you, he will be ashamed for you to associate with one who is so low and depraved. Then if her position in society is respectable, and he feels like continuing his attentions, he will feel grateful to you, because of your doing so much for his pleasure. He will admire your generosity, and regard you as a whole-souled woman, and will love you more and more and will in time return to you with a love all the stronger. But suppose this course should lead to illicit intimacy ; it will be no fault of yours, and your opposition will only intensify the attraction and then you have given them a cause to hate you, and they may make it more unpleasant for you. Open social association is less liable to lead to illicit intercourse than if it were opposed ; causing them to meet clandestinely, as they certainly would be caused to do were you to



oppose them. It will be best to act as above, unless you intend to use infidelity as a means of securing a divorce, and even then it is the best, as it will cause the guilty party to be more confidential and you will be more able to judge with some degree of certainty whether the intimacy continues or not. If the attentions be persisted in, you will be more liable to retain the affections, than if you opposed them, which will allow you to still have some influence with him ; and should you oppose these meetings, do so only upon the ground of morality, expediency and respectability; but never on the grounds of personality. Above all things, do not gather up all the vindictiveness your nature is capable of and use it against the intruder or your companion. Such a course will surely lessen the love of your husband, and will strengthen his affection for the other woman. This will also be the first entrance of the wedge that will widen and finally sever your connections, driving away your husband to the side of the intruder.

### DIVORCE.

This is becoming so frequent, that to pass without it would be unpardonable. Legal separation of a husband and wife, and the ties that bind them have been allowable in all ages. The Mosaic laws which form the foundation of all law, authorized divorces. But the great and increasing number of divorces, and their causes, have no foundation in the Mosaic law.

At the time this law was given, the Hebrews were greatly in advance of other nations, but marriage with them did not reach the high plane which it did afterwards. In those days they married in a manner which is still common to the inhabitants of India. The girl or woman had very little, if anything, to say as to whom she would choose for her husband, and it was not fashionable to make love as it is to-day. Marriage was a mere matter of economy—the woman being considered no more than a slave. As a result, there was very much unhappiness among the people. The great Law Giver laid down the law, that whosoever should put away his wife for any cause except adultery, and should marry again, the same would commit adultery. This law was intended to correct the evil of persons divorcing without a cause. The original and Divine idea of marriage is that a man and his wife are joined together by God as one flesh, and are not to be put asunder by man, except for the crime of adultery.



However, in some of the Western States, man has superceded Divine law and has made a law to suit the multitude. But man cannot ignore the Divine laws of Nature without setting aside the great principles of social life as they were outlined by the great Law Giver of Nazareth. So that the state or nation that attempts to treat the divorce law lightly, will cause corruption in the life of its subjects, and will poison the best life of society. It will lead to hasty, ill-assorted matches, increase an unwillingness to yield to each others peculiarities, will lessen family ties and cause a condition of loose morality. Marriage in this way will soon lose all of its sacredness, and will degenerate into a mere physical union, very little above that of animals. Nothing can be more cruel than the laws of some of the Western States in granting divorces for the slightest causes, without even hearing the testimony of the wife, and sometimes without the presence of the petitioner. A divorce mill, we say, is the most cruel of modern institutions. By it a loving, trusting and faithful wife, from the simplest shadow of unloyalty, has a decree of divorce issued against her, by which she is separated from her husband, her home, and often her children, and is forced to seek shelter in the cold, cruel world, and sometimes is forced to make an alliance with another man, with whom she must, according to the laws of God, live in a state of adultery.

But where there is a condition of incompatibility of temper, insanity, or an incurable or contagious disease, existing in the wife or the husband, which would be transmitted to the offspring, then divorce would be a benefit, not only to the immediate parties concerned, but to humanity in general. Should divorces be granted for any cause, the woman in all cases should be provided for. She should under all circumstances, whether married or single, have control of her property. But to compel a man to furnish bed and board to a woman who at one time was his wife, and is now the wife of the world, is an evil which should be corrected and provided for. Man should be compelled to furnish a wife a living, in keeping with his income, as long as she remains single and chaste, but he should be released from all obligation as soon as she is proven otherwise.



**INFLUENCE OF THE DEATH OF HUSBAND ON WIFE.**

It is a well known fact that persons of opposite sex, meet, admire, fall in love, marry and live together often until separated by death. It is also a well known fact that married people begin married life, loving each other as they then suppose, as much as is possible for any one to love, but they find in after years that they actually only begun to love, and that the longer they live together, the more they love and look and act alike, the stronger that love grows. But the scythe of time cuts down all classes and sexes alike, and each home must eventually yield up one of its dear ones; often it is the husband and father that feels the impress of death's ruthless hand, and the union perfected to the highest degree, is now severed, and the once happy wife becomes a widow to tread through life once more, single handed and alone. She dresses in mourning to outwardly symbolize that mournful and sad state of mind, the anguish and sorrow of heart she is now called upon to experience. Her support, comfort and companion is gone, and at the grave she has buried all but the memories of the once happy home. Her health and comfort must necessarily suffer. Countless numbers of women date their failing health to the death of their husbands. The accustomed stimulus to the reproductive functions is taken away, and nature must provide for another means of removing these secretions. This she does by increasing the regular and periodical discharge, but should these organs already have been diseased, they must follow a train of symptoms that cause a great amount of anxiety. Authors teach us that sexual intercourse is a necessity to man but not to woman; as women do not naturally have as much secretions as man, and she is provided with the medium of menstruation as an outlet. Yet it is well known that a fit of anger will stop digestion and cause billiousness and sometimes weeks of suffering; it necessarily follows that a shock so great as the loss of a husband and life companion, half of one's self, cannot suddenly occur without seriously deranging both mind and body.

**OFFSPRING.**

The co-operation of both sexes is required to originate life. Neither sex has any creative power without the other; both must unite.

Nature provided passion in order that the female, when the











ovule was completed and matured, should originate it in the male that the male and female could unite and exercise it together at the same time and place and together enjoy pleasure.

As nature gives only pleasure to the proper and complete fulfillment of her laws, the complete and perfect action of both male and female in the reproductive act should give pleasure. Although it is possible for woman to conceive without great pleasure, the action on the part of the reproductive organs is necessary to originate life and any action must, therefore, give pleasure.

As reproduction is a Divine law, and as the uniting of sexes and the union of souls constitute marriage, men from all times have made laws legalizing and sanctioning marriage, that males and females should unite and enjoy the pleasures of marriage and reproduction. Nature never intended that one woman or one man should be made more happy than the other. Marriage was established, but it was for the sole purpose of peopling the earth and the perpetuation of the race, more than the selfish gratification of selfish pleasures, and marriage will not be complete if it does not include the bearing of children. Both parties contracting marriage contemplate the bearing and rearing of children, and no matter how tender their mutual affections may be, they will both be conscious of the lack of something to complete their union. A yearning of heart that will not find complete satisfaction in any other token of love given or received, a feeling as if there was a cup of blessing from which they have yet to drink before their happiness will be complete, and nothing will fill this yearning and supply this want so much as the bearing of children.

Children are the greatest blessings of the home, the sunlight that brightens the gloom of trials and reverses, and softens the cares and sorrows of our daily existence.

There is no spot so dreary as that home where old age has come to husband and wife and which has not been blessed by the presence of children. There can be no more bitter sorrow come to the husband or wife than to be told they can never become a father or mother. Children disturb the harmony of a home, break up the quiet, but they bring to the mother a joy, a serenity of bliss which cannot be described; they cement the home affections and bind the parents closer to domestic duties, and the thought of the dear ones will save the father from ruin, carry the mother safely through temptation and do away with indifference,



idleness, sloth, negligence in the home. They make women better, indifferent men good and good men better. They are the light, joy and happiness of the home. In them our fondest hopes are centered. They stimulate our ambitions, increase our hopes and desires, inspire our highest natures and lead us to only pure and high living and without them, home is but a barren waste.

## PREVENTION OF CONCEPTION AND LIMITATION OF OFFSPRING.

These are questions of so much importance that they involve the health of the mother and the well being of humanity, on the one hand, and the Divine Love of God on the other, for he has said, "Be ye fruitful and multiply."

They are questions that involve the happiness of mothers and children, as well as the welfare of nations.

We have heard arguments for, and against it. Pious clergymen advocate large families and unlimited offspring, while skillful specialists, on the other hand, warn suffering women against the great dangers of too frequent childbearing, while wives and husbands without number, heed not the warnings of both clergyman and physician, and endeavor to escape the responsibility of wedlock, and do not hesitate to resort to the most dangerous means of accomplishing this end.

Stock raisers are well aware of the evil effects of over production among animals. There is always deterioration of size, vigor, symmetry, and every desirable quality is lessened and there is no profit in allowing them to bear, of their kind, to their utmost. Man is but an animal, and if it is not good to have the animals to bear to over-production, it will be found well to limit it in man.

The disastrous effect of over-production is well known both upon mother and children. Dr. Tilt claims that over two-thirds of all cases of womb diseases are traceable to child-bearing in feeble women. Every physician will bear witness of the great amount of debility and disease, produced by over-child-bearing, and that mortality is greatly increased in mothers whose confinements occur too closely together.

Dr. Hills, a very high authority, claims that over-production is the most frequent source of rickets and idiocy in children.

The mother who has already all she can do to keep comfort-



able, a large family, finds that to add another, she would be compelled to withhold the attention that the others require. Weakly herself, she must bring forth weakly children. When either parent suffers from some chronic disease, such as consumption, or syphilis, it will be well to limit the offspring, as it would be the means of inflicting misery upon the unborn, and in time undermine society by throwing a number of puny, sickly, scrofulous, deformed children upon the world, who in turn would propagate poorer, sicklier children. Women who are in continual torture during nine months of pregnancy, should for the same reason limit offspring, as well as to allow her own health recuperate.

Dr. Sismordi, the learned historian of Southern Europe says; "Our duties toward those to whom we give life, are not obscure in the name of a sacred authority, and no man should have more children than he can bring up properly.

Dr. Reilboski, of Paris, took the positive that the limitation of offspring to a certain extent, is not only legitimate, but should be recommended as a measure of public good. He also states that where poverty is allied to the knowledge that offspring can be born only to prostitution or mendicancy, it should be limited or prevented entirely.

Parents should seek to avoid having more children than they can properly nourish and educate. Says a witness in a New York paper: "They do not want the sons and daughters in want."

Dr. Edwards Reich says that the action of reproduction should be placed under the dominion of the will, and a woman should have the right to decide this question if she has the right to decide any. A physician of the Massachusetts Medical Society a few years ago said: "She knows how many children she is able to bear and nourish and take care of. Wives have the right to determine and should demand of their husbands the same consideration that a stock breeder extends to his stock, and if the family is sufficiently large, justice and humanity demands that the husband impose upon himself the same degree of restraint, that is imposed upon the unmarried."

There are a few women who require no limitation whatever. They can bear fine healthy children rapidly and neither she nor the children will suffer any evil results, while others are compelled to use temperance in the use of this, as well as other functions, and a few will be compelled to abstain from this function entirely.



Those physicians and theologians who condemn women to have as many children as they can have, should study the laws of nature in the lower animals. It is time that such injurious practice should be discontinued. Temperance in all things and temperance in child-bearing especially; any excess here as well as elsewhere, is repugnant to morality and is visited by the laws of physiology with certain and severe punishment to both mother and child.

The husband should have self-control and deny himself that which is required of the husband during certain intervals.

Nature herself has prepared to some extent a means of limiting over-productions, and we should avail ourselves of her provision. As has been stated before, women rarely become pregnant during the nursing period, and for this reason, she should nurse her own children until the child is at least a year old. But nursing continued for a long time, will be sure to be followed by weakness to both mother and child. Nature has provided another period ; for a certain season between the monthly sickness, women are sterile. The vesicle which is formed in the ovary and is discharged by menstruation, remains for some days in the womb before it is passed out, and the last ten or twelve days after menstruation, has caused the vesicle to suppress the remains somewhere in the tubes before it is finally passed out, and for a period afterwards, the female is incapable of reproduction, but for a few days before menstruation, she becomes again liable to pregnation, as the male fluid can remain for a number of days in perfect condition in the vagina.

### OTHER METHODS OF LIMITING OFFSPRING.

There are other methods used to limit offspring, and as they are all dangerous we will simply mention them for the purpose of condemning them.

**Onanism** is mentioned for the first time in Gen. 38:6 and following verses : “And it came to pass that he (Onan) went in unto his brother’s wife, that he spilled it on the ground, lest he should give seed to his brother. And the thing which he did displeased the Lord ; wherefore he slew him.” Hence came the name of conjugal onanism.

It is impossible to tell to what extent this vice is practiced unless we observe its consequences. People who fear to commit



the slightest sins, do not hesitate to commit this without the slightest fear. Practitioners everywhere are well aware of the existence of onanism as a cause of disease, and Dr. Devay says : The degree of perturbation that a like practice should exert upon the genital system of woman, by provoking the desires that are not gratified, a profound stimulation is felt through the entire organism. The uterus and fallopian tubes and ovaries enter into a state of orgasm ; a storm that is not appeased by the natural crisis—a nervous super-excitation—persists. There occurs then what would take place on presenting food to a famished man, if one should snatch it from his mouth after once exciting his appetite. The sensibilities of the womb and the entire reproductive apparatus are teased for no purpose, and it is to this cause that we attribute those strange neurotic affections which originate in the genital system of women.

These habits are persisted in to the utter destruction of the good harmony of families, and will result in uterine troubles, hysteria and other nervous troubles that are not met with as often in the conjugal relations as among young virgins, and always arise from the vicious habits of the husband in their intercourse. Dr. Gardner, a professor in a prominent medical college, says : It is undeniable that all the methods employed to prevent pregnancy are physically injurious. Some of these have been characterized with sufficient explicitness, and the injury resulting from incomplete coitus to both parties has been made evident to all who are willing to be convinced. It should require but a moment's consideration to convince any one of the harmfulness of the common use of cold ablutions and astringent infusions, and the various medicated washes. Simple and often wonderfully salutary as is cold lead water to a diseased limb, festering with inflammation, yet few are rash enough to cover a gouty toe, rheumatic knee or erysipelas head with cold water ; yet when in the general state of nervous and physical excitement attendant upon coitus, when the organs principally engaged in the act are congested and turbid with blood, do you think you can, with impunity, throw a flood of cold or even luke-warm water, into the vitals in a continual stream ?

Often women add strong medicinal agents, intended as germicides for the purpose of destroying by dissolution the spermatic fluid, ere it has had time to fulfill its natural destiny.

These powerful astringents suddenly corrugate and close up



the glandular structure of the parts, and is followed necessarily by a corresponding reaction and the final result is debility and exhaustion signalized by leucorrhœa, paralysis, prolapsus and other diseases.

The use of intermediate tegumentary coverings, made of thin rubber or gold beater's skin, so often relied upon as absolute prevention, are cobwebs against protection and are bulwarks against love. Their employment certainly produces a feeling of disgust and shame and are utterly destructive of the true delight of pure and refined sensibilities. They suggest licentiousness and the brothel and their employment degrades to bestiality, the feelings of true manhood and the holy state of matrimony.

Moral degradation, premature exhaustion, and physical debility are the result of these physical frauds. "Honesty is the best policy." The effects of these sins against nature are not felt for years after the cause has been at work and are then not attributed to the true cause. Women have suffered with uterine diseases and general debility and tried all kinds of treatment and failed to get well, simply because they persisted in this vicious habit.

Dr. Goodell, of Philadelphia, has recently called attention to the fact that prevention of conception is one of the most common causes of prolapsus of the ovaries and is a common cause of disease in other organs and especially the bladder, by congestion and sympathy to the other organs.

### *ABORTION AND INFANTICIDE.*

It has been said that the spermatozoan of the male and the ovum of the female, are in the rudimentary form all that is required to make up the human being, divine. Alone, neither of these elements can become anything more than it really is, but the instant that the two elements come in contact, fecundation takes place, and the individual life begins, and from that moment until maturity, the whole process is but one of development, and at the moment of conception, the new being possesses all the right to life that it ever possesses ; then to use means to prevent conception after impregnation has taken place, is murder and murder in cold blood, without cause, of an unknown child, one's nearest relative, a part of one's self, one that momentarily exchanges blood with us. Is it possible that such total depravity can exist in any parent's breast to commit this sin upon one so near to her-



self? To take the sweet life of this innocent unborn infant, is horrible ! horrible !

But we can forgive the poor deluded girl, seduced, betrayed, abandoned, who, in wild frenzy, destroys the evidence of her guilt. To allow this product to come to term, would mean disgrace for two souls ; two living beings would be condemned to a living death in shame. For her, we have only sympathy, but for the married who seek to shirk the divinely ordained duty, we have but contempt.

Abortion is not a modern crime. Infanticide and exposure was the custom among the Romans, Canaanites, Medes, Babylonians and Egyptians, and to-day in Japan and China this exists, as it has in olden time, and in France we have foundling hospitals to receive children abandoned by their parents.

The Greeks practiced infanticide systematically, and at one time their laws required the destruction of all crippled children or weakly ones. In eastern countries, it has become a fashion and in the larger cities of America it constitutes a regular business and is not prevented or interfered with by the police.

Infanticide, or destroying a foetus after quickening, is of comparatively rare occurrence, while abortions occur almost daily and in fact, abortion occurs so frequently, that I am led to believe that we are rapidly becoming a nation of murderers.

Dr. Stone, the learned divine, in speaking of the subject, says : “Will the time come, think ye, when husbands can no longer, as they frequently do, commit the crime of rape upon their unwilling wives and persuade them, or compel them to allow still more dreadful violence to be wreaked upon the children nestling within them ?”

Children fully alive from the moment of conception, that have become fully detached from all organic connection with their parent, and only re-attached to her for the purpose of nutriment and growth, and to destroy this innocent being, is a crime of the same nature, against both our Maker and society, as to destroy an infant, a child or a man.

Ladies boast to each other of the impunity with which they have aborted, as if it was a fashion, as other female customs, both good and bad.

A well-known medical writer says: “The child in the uterus is as much a living being as if it were in the mother’s arms, and to take the life of it at one time would be the same as at another.



It is murder and nothing else." He says: "A common method by which abortion is produced is with an instrument introduced through the vagina into the womb. It is then manipulated in such a manner as to destroy the delicate foetal membranes by which the foetus is attached to the internal surface of the womb. This attaching membrane not only holds the foetus in its place, but is the channel by which its life is maintained, and its development furthered. When this membrane is ruptured, the life supply of the foetus is cut off and of course it dies. It is then expelled from the womb by natural action."

Almost all kinds of articles are used in lieu of surgical instruments. The physician hears of goose quills, umbrella stays, knitting needles, etc. The profession is not aware of the danger attendant upon the use of instruments to cause abortion. Frequently the womb is perforated, leaving a source of danger to the mother who from such injuries, as well as from the decaying portion of the foetus in the womb, being absorbed into the system and causing septicemia or pyæmia, and this is not the only danger as it sometimes happens that the uterine tissues do not fully close up after the membranes have been expelled, and as a result we have a hemorrhage which threatens and destroys the life of the mother. Some of these mothers are of great respectability, intelligent and profess Christianity, but do not hesitate to take the life of their child, and sometimes their own by one simple rash act. This operation is dangerous even in the hands of those unprincipled and disreputable individuals, who make it a profession and a business.

Another common form of producing abortion is by violent exercise. Pregnant women sometimes jump from some short elevation to a hard surface, so as to very considerably jar the body; the object being to dislodge the foetus from the womb. Others will take long journeys in rough vehicles, over rough and uneven roads for the same purpose.

Women who take this method of producing abortion, think it less sinful. She forgets that the gravity of any act is in the extent. The introduction of cold or hot water, either with or without glycerine, into the uterus by means of a syringe, to which is attached a rubber catheter, and thereby loosening and separating the membranes from the womb and causing uterine colic, and contraction, is another method of destroying and dislodging the foetus. This is the most successful method, but is attended with



severe pains, as the water is a foreign substance, and occasionally causes death from the entrance of air into the uterine sinuses.

Drugs of various kinds and patent nostrums are largely used in this work. A well known medical writer says: "The number of deaths from this method of producing abortion is truly appalling. All the deaths from the use of medicines and agents intended to stimulate uterine contractions are not known, many are not even suspected, but enough deaths occur to deter women from the dangerous risk."

These medicines are all poisons when administered in a dose sufficiently large to cause abortion and should death to the mother not result from their administration, they are strong enough to cause such serious and painful inflammations of the stomach, as to compel the patient to despair of her life. The drug method is more dangerous even than by instrument.

Abortion is a most unnatural crime, and the effect upon the mother is almost as dangerous as upon the child; her suffering is vastly greater, and should she survive the shock of the terrible outrage against her nature, she will after be doomed to a life of suffering and misery, while the pain to the child would be but momentarily.

Statistics prove that the immediate danger from death in abortion is fifteen times as great as in natural child-birth. One abortion will cause more injury than eighteen child-births.

And what if the mother does not succeed in her attempts against nature and the life or the unwelcome child? Fearful results must follow. The murderous intent of the mother may be stamped indelibly upon the character of the new being, giving a natural propensity for the commission of crimes and murderous deeds. Again; supposing the attempts to destroy the foetus be unsuccessful and result only in horrid mutilation of its tender form? What a sickening thought. When such a child is born, it will bear evidence by its crippled and mis-shapen body, of the outrage committed upon it.

A well known author quotes a case in his practice that will illustrate. "A fashionable young lady, desiring to have no more children, as she had determined upon a trip to Europe, consulted a professional abortionist, who attempted to effect the desired end by violence. A pointed instrument was used again and again, without the looked-for result, and at last she was told there was some mistake, as she could not be pregnant, and declined to per-



form any further operation. In due time the woman was delivered of an infant, shockingly mutilated, with one eye entirely gone, and the brain injured, and this otherwise robust child wanting entirely in ordinary sense. This poor mother, it would seem, needs no further punishment for her sin. Ten years, face to face with this poor, blind idiot. Where imbecelity was her direct work, is surely enough punishment."

But the crime of abortion is no more a crime than that which is known as farming ; it is nothing less than murder by proxy.

Parents who recoil with holy horror at the idea of destroying their offspring, although they greatly desire to be disembarassed of them, place them, without the slightest remorse, in the hands of nurses, who enjoy the sinful reputation of never returning the children to those who have entrusted them to their care.

These unfortunate little beings are condemned to perish from inanition and bad treatment. The very large number of these innocent victims is greater than one would at first imagine, and are indeed very much greater than the number of infanticides that are reported to the police and the public prosecutions to be sent to the courts.



## HYGIENE OF PREGNANCY.

To the pregnant woman there can be no subject of more importance than knowing what is best to do to insure the health and welfare of herself, as well as of the new being within her.

She can no longer with impunity disobey nature's laws. She has entered upon a new circle of her maternal duties, and any indiscretion on her part may either destroy, mark or maim the child. Its future, to a great extent, depends upon its mother's health, thoughts and duties. Should she run, jump or become injured, the child must also become injured ; her thoughts must, in a great measure, be the thoughts of the child in future life ; things that now influence the mother, must in time have their influence upon the child. The welfare of this new being must be considered in all things that the mother does. This is not imaginary, as the great number of miscarriages and deformed children prove.

Although all mothers desire to have perfect, healthy and well-formed children, very few conduct themselves in a manner that will insure a happy development of their offspring.

On account of want of proper knowledge or neglect in carrying out the measures specially demanded from this changed state of the system (during pregnancy), a large number of puny, feeble-minded and deformed infants are daily ushered into the world, doomed to a precarious and short existence. But those mothers who have lived lives in accordance with nature's intentions need but little change in their conduct during pregnancy.

The ordeal is certainly a trying one, but if the woman has had an active, vigorous and healthful life, maternity need give no gloomy forebodings. It is best for her, if it be her first pregnancy, to avoid associating with idle women talkers. Such people, through their tales of suffering, scare the prospective mother until she lives in constant fear and dread of the future. Such should think of other matters ; find some employment that will keep the mind occupied ; but never think of the moments of birth until the time comes. Persons in the country talk of this matter too much. If there was anything to be gained or learned from their conversation, it would be a different matter. But the child



will be born when the time comes for it, and, as there is more or less suffering and pain attending the process, every prospective mother should prepare for it—not by listening to these idle tales of sufferings of other women—but by keeping her present health in as good a condition as possible and her mind in a state of peace and quiet. She should talk and think about her coming trial as little as possible; her physician, husband, mother or this book are her best advisors, and she should remember that other women have borne children and lived, and became more healthy for having done so, and that nature has appointed this way of bringing men and women into the world; that God is good and merciful, and lays no burden upon any of his children heavier than they can bear.

By so keeping her mind occupied, it not only helps her pass over the time of gestation but strengthens her character and gives strength to the child within her. The mothers who listen to these idle tales will give birth to a coward, but the one who keeps up a spirit of determination to conquer will impart that spirit. Her mind should dwell upon the permanent pleasures of maternity and thus impart a happy and hopeful disposition to the child.

### PLEASANT SURROUNDINGS

Are essentially necessary during any period of life, but during gestation it is doubly important, for the health of the mother and the good of the child. The father should remember that the new being is a part of himself and that his wife, the prospective mother of the new heir, has enough to contend with; she is already melancholy and suffering; he should make her home and surroundings as pleasant for her as his means will justify. Tell her that you love her and will take care of her; that you will be with her when the time comes. Satisfy her every longing and see to it that she has no more burdens to bear than is absolutely necessary; her sufferings are enough without adding any additional new ones. Even the stock breeder takes better care of the dam during her carrying period, in order that it may bring forth healthy, well-developed animal.

Then, since it is so important for these mothers to receive good care, give them all the sympathy that you can; it will be as important to you to give your time at home as to your business. Success in business is but temporary, but a successful, strong-



mind, healthy child lasts forever; it will work for you when you can no longer work for yourself. When a child is born enfeebled, dwarfed or deformed, and grows up to maturity and discovers that the parents are responsible for its terrible handicapping, what must its feelings be towards them?

The poorest and humblest can ensure perfectly healthy children by care in hygiene; a palatial home is not essential, simply desirable and agreeable companionship, a comfortable home and freedom from exhausting toil and distressing anxieties. Nervous impressions, such as anger, fear and disgust as experienced by the mother are responsible for much of the deformities of the foetus, and for this reason a pregnant woman should avoid the presence of all disagreeable and unsightly objects, as well as all causes of excitement, and remove as much as possible, vivid and unpleasant impressions by quiet diversion of the mind.

## FOOD.

The food taken by the mother during gestation has much to do with her future labor and the development of the child. She must supply sufficient and abundance of nourishing and blood-making food. She now has to provide food not only for herself, but for the rapidly-developing being within her; the quantity should not be excessive, yet should exceed what she is accustomed to under ordinary circumstances.

The quality will depend much upon circumstances. If there be no abnormal conditions existing, she may use animal food, tender and well cooked; but sparingly, as it supplies certain principles necessary to the proper development of the foetus as well as for support to herself. But generally vegetables of good quality; ripe fruits are very desirable on account of their laxative effect upon the bowels. Porridge and milk, or cracked wheat and milk are very useful for the same purpose.

The time of taking food should vary, beside the regular period of taking meals. Pregnant women suffer with hunger between times and should satisfy their cravings, by having all ready prepared biscuits, or a bowl of milk, or mush and milk; grapes or fruits in season can be taken, even during the night. If she be hungry, she can have a plate of fruit or glass of milk within reach, so that she can take them without the trouble of arising from the bed. Any cravings for any particular kind of food should



be satisfied, so long as they do not interfere with the general health.

The digestion should be watched, and such articles of diet as are known to aid or stimulate it should be used. A strange fact is that articles of food ordinarily easily digested and assimilated during the changes produced by pregnancy, become most intolerable to the stomach, while food that is known to be hard to digest, is not only craved, but easily assimilated and digested; nature provides a means of telling us what she wants by giving us these desires; therefore, we should satisfy them, no matter what it may be, or how unreasonable the demand may be seen.

### CAN CONFINEMENT BE MADE EASY?

The savage woman seems to have painless or at least a very small amount of pain during parturition and confinement. When her time comes, she simply drops behind the line of march, beside a stream of water and there gives birth. She then takes a cold bath in the stream, washes her infant, straps it on her back, and hastens on foot and soon catches up with the other party, being absent not more than a few hours; and upon her return, she resumes her usual avocations.

But civilized life completely changes this. Instead of painless birth, we have a condition of affairs that is greatly painful, to say the least. There must be something wrong with our mode of living. Women must have figures and forms that are not perfect. The Indian woman uses no corset, no restraint upon her body while her civilized sister uses, not only a corset, but she laces it so tightly that she can scarcely breathe. This condition persisted in for a time, compresses the ribs, and they in turn compress the lungs and force the intestines up into the already crowded space and the rest down into a still smaller space, thus crowding the intestines and kidneys, spleen, liver, bladder and uterus, into a space scarcely large enough to support the intestines. She becomes constipated and the retained waste matter helps to lessen the already small space, and presses upon an uterus that receives too little and greatly impoverished blood. As a result, we have painful, profuse, scanty menstruation. These add to the already existing inflammation and at last we have the chronic disease so



frequent in women who lace and wear corsets. Impregnation occurring during the existence of these diseases, can do nothing less than cause more or less disturbance during pregnancy. Then your women of to-day, feel that it is a disgrace to do house-work or in fact any kind of manual labor. The Indian woman does all of the work about the home, the husband only hunting, while she does all the rest. Want of proper exercise then must be an important factor in the painless confinement of women. Breathing is another important agent in child-bearing. The stoop shoulders, compressing the lungs, relaxing the abdominal muscles, (the muscles which aid in expelling the foetus), causing displacement of the uterus. Most women take short exhalations, filling only the upper portion of the lungs. Thus the blood receives less oxygen than it should and the carbonic acid gas is not eliminated, but returns and impoverishes and poisons the blood until it is not fit to supply the waste. Thus the uterine muscles do not receive sufficient nourishment, and are weak, thus giving but feeble contraction in expelling the foetus.

Food has much to do with the matter of easy labor. Upon the quantity and quality of the food depends the nourishment of the child as well as the mother. Should the quantity be insufficient to nourish both, one or the other must of necessity suffer. Should it be the mother that receives the full amount of the nourishment, the child will become weak, poor and puny, and if the child receives the nourishment, the reverse happens. The quality or kind of food taken during gestation, is as important as the quantity. Upon the quality depends the size of the foetus, and upon the size of the foetus depends the length and severity of the labor. Therefore if it is desired to have labor without much pain it will be necessary to use only such food as will not form bone, as size depends upon bone, generally, and the bones of the head especially. Meats, oatmeal, turnips, and wheat flour for the reason that they are rich in phosphates and earthy salts and are bone forming food, should be avoided and a diet consisting of fruits, milk, potatoes, rice, etc., on account of the deficiency of earthy salts, should be adopted.

The following table will aid somewhat in the proper selection of articles of food, remembering that earthy salts are bone-forming :



## PERCENTAGE COMPOSITION OF DIFFERENT FOODS.

	WATER.	ALBUMIN.	STARCH.	SUGAR.	FATS.	SALTS.
Bread -	37	8.1	47.4	3.6	1.6	2.3
Milk - -	86	4.1	. . .	5.2	3.9	0.8
Eggs -	74	14.0	. . .	. . .	10.5	1.5
Meat - -	54	27.6	. . .	. . .	15.45	2.95
Potatoes -	75	2.1	18.8	3.2	0.2	0.7
Corn - -	14	11.1	64.7	0.4	8.1	1.7
Oatmeal -	15	12.6	58.4	4.4	5.6	3
Turnips -	91	1.2	5.1	2.1	. . .	6
Carrots -	83	1.3	8.4	6.1	0.1	1.0
Rice - -	13	6.3	79.1	0.4	0.7	0.5

In dieting, it is well to remember that a proper combination of the different elements is necessary and essential to a proper and healthy nutrition, and that no one class of food is capable of maintaining life for any definite length of time. It will be well to remember also, that albuminous food in excess causes gout, gravel, and diseases of the joints.

Oleaginous foods in excess, cause biliousness, and a deficiency of it causes scrofula.

Farinaceous food when long continued in excess causes neuralgia and rheumatism.

The amount of food required to properly sustain and keep the human body in a normally healthy condition is about 31½ oz. of butter, 19 oz. of bread, ¾ lbs. meat, or 4600 grains of carbon and 300 grains of nitrogen. The bread representing carbon and the meat nitrogen; other articles found in the list can be substituted for the above.

Rich gravies and pastries should be avoided, on account of their tendency to cause dyspepsia. Tea and coffee for the same reason should be used sparingly.

Acid fruits have been greatly recommended as a diet to prevent the formation of bone; the acids dissolving the phosphates and preventing inflammation; hence, their use during gestation will cause a deficiency of the bony parts of the foetus, thus allowing it to be easily moulded and compressed, making labor nearly painless.

A certain chemist of London, whose wife always suffered with painful labor, first advocated the fruit diet on account of its containing a very small quantity of earthy salts, and experimented



upon his wife with the result of reducing her painful and dangerous labors to easy and comparatively painless ones. He compelled his wife to avoid gravies and meats, and allowed her only fruits, and especially acid fruits, with a very small quantity of milk, potatoes and rice.

But labor can be perfectly free from all pain. Medicine, surgery and obstetrics have not been behind hand in the general advance of all scientific knowledge. It has, besides the above natural methods of reducing the danger and pain of parturition, given us chloroform and ether. These agents, when in the hands a skillful physician, are perfectly safe, both to the mother and the child, and do not retard the labor. They also, when properly employed, induce refreshing sleep, and revive the drooping nervous system.

But chloroform or ether should never be used unless the physician personally administers them ; neither should they be used in natural, easy and short labors, but only in lingering cases where there is great pain, or where instruments are to be employed. Here their value is beyond all price.

## CLOTHING.

There are few things which have a greater bearing upon the comfort of the mother and the welfare of the child than the clothing she wears. The style and manner of adjusting them is of great importance, especially with young mothers. Comfort should be her guide in matter of dress; but too many seek to hide their condition as long as possible and will wear corsets and have them laced as tightly as possible, and thereby interfere with the natural and increasing enlargement of the abdomen, much to their discomfort and harm of the foetus.

The Spartans had a law compelling all women, when pregnant to wear loose and flowing robes in order to have them produce healthy and perfect children for the betterment of the race. The same law could be passed to-day with advantage, as the state depends upon the character of the children born to it. It also has the right to protect itself, by compelling women to bring forth the very best of which they are capable.

*Ènciente* is a French term; it means to be unbound and was originally applied to pregnant women from the habit of laying



aside the girdle or belt which they were accustomed to wear, but took off or loosened for the purpose of allowing free and natural development of the abdomen and foetus during pregnancy.

But no woman should advertise her state by dressing like a balloon. A simple, modest garment fitting neatly and snugly about the shoulders and left loose about the hips and abdomen will be well. She can find plenty of styles that will answer her purpose. She can select one that has no bones or stays and she should do away with the petticoat and all bands of every description, and see that there be no pressure upon the lungs to interfere with breathing, or upon the stomach to stop digestion. Looseness is here essential as it means health or sickness according to the degree of tightness.

The weight of the clothing is a matter of considerable importance, as the pregnant woman has not so good a circulation as at other times and therefore must suffer from cold more. She should guard against this by wearing good thick flannel or knit under-garments, the union pattern is the best as it does away with all pressure over the vital organs and at the same time secures a desirable feature in having the weight fall upon the shoulders. This is an important matter in the dress, as the pressure of the foetus and uterus upon the arteries, nerves and veins of the pelvic region during the latter months of pregnancy interferes with the circulation and the blood is not returned from the lower limbs as readily and any constricting bands retard it still more. Garters for this same reason should never be worn as they may cause varicose veins, which, by ulcerating, become very troublesome.

### EXERCISE.

This is a matter of very great importance; and many physicians are either blind or ignorant in regard to it. Women are naturally modest and of a retiring disposition, and the regard for public esteem during this period will cause them to remain in doors during most of their ante-confinement period.

Motion is a law of nature, and to be healthy, all must exercise. All plants must have air and sunshine to live; the mother and growing child must have pure air, sunshine, and a moderate amount of exercise in order to be cheerful and happy, and no mother can afford to remain indoors, lounging upon sofas and easy chairs, demanding that every member of the household, as



well as to its servants, to wait upon her ; this is dangerous to both mother and child.

Then to secure this health and pleasure, the mother should exercise in the open air; walking is best, but no running, jumping or roughness of any kind should be permitted on account of the tendency to cause miscarriage ; for the same reason, riding in poorly-constructed carriages, or long rides on railroad trains should be avoided, and never ride horseback, or ride in a vehicle over rough roads, or lift heavy weights, or carry heavy burdens, for the same reason.

Most women in taking exercise, will be able to select some employment, such as the ordinary household duties ; climbing up and down stairs, or walking in the garden, or through the park, if she lives in a city; or one of the gentle exercises given in another chapter of this book, can be chosen and persisted in until slight fatigue is experienced. Should she desire to walk, a suitable companion should be chosen ; one who is jovial and fun-loving, one who is fond of telling stories, and can make the walk instructive and pleasurable as well as useful. Exercise for the sake of exercise is apt to become irksome, and will not do the same amount of good as when taken under more pleasant circumstances. The amount of exercise must vary with different women, some being able to take more than others. But she should be guided by the state of her health, her condition and the capabilities of her strength. She will find the ordinary household duties beneficial and answer every purpose, as they furnish amusement as well as exercise. She may select those duties which she will be more able to perform, being guided by the state of her health. Should she be nervous or delicate, very little labor can, with safety, be performed.

As she nears the end of pregnancy, she should take more rest, and avoid all labor, and save her strength for her delivery; but she should not become indolent, as indolence is dangerous. She should remember that one is made strong by feats of strength.

## VENTILATION.

Air, light and exercise are the great life-giving principles of nature, and pure air is, of the three, most important, and a home should be ventilated, as the most of a pregnant woman's time is to be spent within doors. The sitting room and the bed chamber should each day be thrown open and let the pure air flow in and its impure



air flow out. She can retire to an inner room while this is being done. But pure air should flow freely and continuously. By keeping the windows up at the bottom and down at the top, if the house is a two-story one, the air can come in down stairs and pass out at the top. Some houses now days are being built with a solarium at the top, where invalids and others can sit for hours daily and receive the pure air and sunlight. Some persons feel, and especially in the cold weather, that they cannot have any draught upon them. This can be avoided by placing screens in front of the window in such a manner as to divert the direct waves of air. But extremes of heat and cold should be avoided now more carefully than at other times.

### BATHING.

This is a most healthful practice and if those who have never been in the habit of bathing would begin it, during pregnancy they would derive a very great amount of benefit from it. But the indiscriminate practice of recommending all pregnant women to bathe, using the whole body immersion and the hot hip bath is bad practice. No matter how much good could be gained from a cold shower bath of mornings during other periods, it will, during pregnancy, result most disastrously, as it produces too great a shock to the system, while hot baths will be too relaxing. Foot baths should be carefully taken, but cold ones never.

Sponging the surface with tepid water conduces to cleanliness and is better than entire baths. Yet in some women of nervous temperament, a luke warm bath at night before retiring has a most soothing effect. For further description of baths and their influence see general baths.

### SLEEP.

During pregnancy a greater amount of sleep will be necessary than at other times and it will have a sedative and soothing influence upon the mind and nervous system of the mother and will favor the growth of the fœtus. The promptings of nature in this matter should not be disregarded. Therefore, if the mother desires to lie abed late of mornings and go to bed early at night, she should satisfy this desire and should she feel sleepy during the day time, a short period of repose upon a convenient cot or bed will be very refreshing. The mother for this reason should never



be night watch for the sick. During the latter months of pregnancy, it is not unusual for the mother to feel smothering upon lying down; to overcome this she can support the back and shoulders with cushions or pillows, or have the head of the bed well elevated.

The bed should never be composed of feathers as they are usually dusty and harbor disease. A good, firm mattress composed of hair, cotton or wool will be softer, firmer and more healthful. The covering can be of blankets and sheets, rather than coverlids as they are warmer, permit of better ventilation and are easier washed.

### EFFECT OF PREGNANCY ON HEALTH.

Some women give as an excuse for not getting married that they do not care to get married and bear children as it is the ruination of any woman.

This is a great mistake. How many girls of your acquaintance were poor, sickly girls before marriage, complaining at every little change in the weather, suffering with menstrual trouble each periodical change, or, worse still, are afflicted with hysteria, nervous headaches, neurasthenia, St. Vitus' dance and the whole host of nervous troubles peculiar to unmarried women. In a short time after marriage they become plump and hearty, their cramps and hysteria have disappeared, and if they were thin, they fill out and grow fat, while if they were excessively fleshy, the surplus flesh soon leaves them and a perfect state of health follows. Then again, pregnancy benefits still more. It is not a diseased condition but a natural process, and those who are fortunate enough to become pregnant, have conferred upon them during this period, an increased amount of vigor. Women as a rule, have better health during this time—except morning sickness—than at any other period of life. She is also specially provided for against contagious diseases and other maladies, and is less apt to die than at any other time. Her general condition is greatly improved; she receives an impress more favorable to her than to her unmarried sisters; for statistics prove that mothers live longer than unmarried women, and although women look forward to this time as the most anxious stage of reproduction, they should feel encouraged to think that nature has specially provided that they shall not be subjected to the pains of disease, and also that nature



rewards those who live up to her laws. Women may do this by marrying, bearing children, and by so doing, she will be rewarded by nature in adding strength and increasing her health and lengthening her days. But women must not take too much for granted. They must depend upon it that the condition of the child will be just as the mother is ; thus, she should take care to avoid all excitement, and any and all unpleasant experiences and impressions. She must make such changes in her habits, as will insure perfect health to herself as well as to her child.

### SEXUAL CONGRESS DURING PREGNANCY.

This is a subject that has received much discussion. Some authors have taken the ground that women should avoid all intercourse during the time of gestation, while others claim that there can not possibly be any harm from such relations ; but we believe that both are right and yet wrong. The fact that during such times as the wife would naturally be unwell, were she not pregnant, marital relations should be suspended, as at this particular time, intercourse will be injurious to the mother and dangerous to the life of the child, as it is likely to cause a miscarriage. But if intercourse be engaged in at any time except at the regular period, it will not be harmful to the mother, and often benefits the mother should she desire it, as many women who never experience any sexual feeling at other times, have this feeling stimulated and heightened during this period. Relieving craving and longing for intercourse will be beneficial to herself as well as the child ; but should the mother have had a miscarriage at a previous pregnancy, it will be well to indulge this pleasure sparingly and with care, lest it again result in miscarriage. Sometimes a temporary separation for the first three or four months of pregnancy will be followed by the best results. After this time has elapsed, ordinary relations may be resumed with safety ; but should miscarriage have happened, intercourse should not be permitted for at least four or five weeks. This should be rigidly observed, as any excitement of the uterus in its enlarged condition will result in chronic hypertrophy of the womb—an almost incurable disease. The ancient custom of keeping the womb sacred is still observed by some of the Congo tribes. The husband in these countries is compelled to set aside his wife as soon as she becomes aware that conception has taken place, and is not allowed to know



her again until the child is born. American husbands would never submit to such treatment, nor should they. But these people have also the custom of choosing another wife, if the husband is able to support another one ; and he continues with her until she also conceives ; but should he not desire another wife, he has the privilege of choosing a concubine, but he must bear no children by her. This is a wise provision for them, as with these people woman's only or chief duty is to bear children. On account of the compulsory continence during the two hundred and eighty days of gestation, they have adopted polygamy.

### IMPROVEMENT OF THE HUMAN RACE BY HEREDITARY DESCENT.

Heredity and descent has been studied by stockmen to such a degree that they can produce the kind of animals desired, by making certain combinations.

The fastest horses are descendants from the Wilks and Hambletonian stock, both noted for their speed. Chicken breeders produce the variety of chick they desire by crossing. This requires some knowledge and the human race can and will be improved as soon as men and women get over their present fear of knowledge and their false modesty. It is as much to have proper knowledge in the production of superior children as it is essential to have a scientific knowledge of how to produce the fastest horse, the largest chicken, or an intelligent hunting dog.

As soon as we learn that duty, the better it will be for the race. Then human beings will be produced superior in every way, to any the world has yet seen, not only can the body be perfected, made larger, more beautiful, stronger and freed from disease tendencies but the mind also can be strengthened and perfected, so that the future generation will be far superior to the most gifted ever known.

The power of the mind depends upon the perfect size, development and depth of the convolutions, and the organization of the brain. The depth of the convolutions and size of the brain can be as easily developed as the muscles.

**Physiology** teaches that certain movements can be excited by stimulating a particular part of the brain, that the organs of speech have for their center a small spot in the left side and mid-



way to the front of the brain, and that stimulating the top and center of the head, causes the leg to move a little further back and the arm will move in front of the center of the head and a little below and to the side moves the face.

While the seat of life is in the cerebellum or small brain, the power to think and act or execute movements are on top and in the larger brain or cerebrum. Thus, by studying these simple facts, and by making a careful combination, we can easily have children to excel in those very qualities we have so desired them to have. In making an examination of the human brain, it will be seen that, although the outline seems to be perfect and fill the skull, we can easily determine that there is a deficiency, a flatness, a non-development of these organs, and it is as easy to increase and develop by judicious training these particular organs as it is to develop any special set of particular muscles.

By inter-marriage, even to cousins, and by proper selection, it will be possible to produce human beings with larger brains, and consequently larger, stronger and more perfect minds, as far above those of our present greatest thinkers, as they are above the brute. But in order to effect this change, marriage must be a science based upon the knowledge of physiology, the law of natural selection and hereditary descent, instead of a mere matter of chance as now.

There is no longer anyone who is so foolish as to oppose the higher development of animals by superior breeding, but although we find everyone willing and even anxious to improve their stock, they care little as to the improvement of themselves or their children.

Men are but animals, with a more perfect development and if animals can be improved so as to increase from one mile in two minutes and forty seconds, to one mile in 2:6 and 3:4 (all this has been accomplished in the short space of fifteen years or in about four generations) men can improve their offspring by proper selection and education.

These same laws applied to man, would in a little longer time make of him a mental giant compared with the present generation. This can be easily illustrated in the lower animals. See the wild uncared-for, ill-bred domestic animals and then compare them with the thoroughbred and note the difference. They are scarcely the same being; all the bad points are carefully bred out and the good ones developed to the utmost.



These same results will follow among human beings if procreation is more generally studied, and taught from father to son and mother to daughter, instead of carefully avoiding, preventing and hiding these truths from the boys and girls at the age of puberty. It is a Christian duty to instruct them, not to hide from them all that it is possible to know of procreation.

Boys and girls instinctively seek for knowledge and this craving must be satisfied in the proper way or else we must submit to the dangerous teachings of unreliable and often obscene books and evil companions; therefore, when this knowledge is applied to ourselves with the same degree that the horse breeder applies it to his stock, we will see the same degree of development, and then our greatest men will select only the greatest women for marriage, and the children can be superior children and excel in the same degree in which their parents excelled.

## INHERITANCE.

The subject of inheritance is one of absorbing interest. It introduces very many singular facts that have a direct bearing upon the welfare and happiness of every individual.

Inheritance has been divided into several varieties or kinds. First, is the direct inheritance of qualities that a child receives from its father or mother. Second, indirect inheritance, where a child bears more striking resemblance to some uncle or aunt, than to either its father or mother; third, atavism, the recurrence of any peculiarity or disease of an ancestor, in a subsequent generation, after the interval of a generation or two. In this a child will exhibit some peculiar characteristics of its great grandmother, or father, that was almost or wholly lost in the parent.

Sometimes a son will resemble his maternal more than his paternal grandsire; in some males, attributes such as a peculiarity of the hair in baldness, or a curling of the beard, or some disease confined to the male sex, and although the mother cannot possess or exhibit such male qualities, she will transmit them through her blood, from her father to her son.

The fourth is that variety in which the child resembles neither parent, but the first husband of the mother. It will sometimes happen that a woman contracting a second marriage, transmits to the offspring of that marriage, the peculiarities she has received through the first union. This fact is well known to



breeders of stock who prevent their mares and cattle from running with males of a different or inferior stock. A man, many years dead, will transmit his diseases and exert an influence over the future offspring of his wife by the ineffaceable impress he had made in his conjugal relation with her upon her whole being.

A child may be compelled, therefore, to give testimony in favor of the old law, "That the sins of the father shall be descended upon the head of their children, even to the tenth generation" and a woman may see in her child, the touch of his hand, or hear a voice that is stilled in death. This peculiar feature has been met with in the mixture of the African and the Anglo-Saxon parents. A case occurred in which a man's wife bore a son almost a mulatto, and could not account for it, until he had occasion to visit France and there he learned that his great grandfather was a full-blooded African. It will be seen that marriage is a matter of no small consequence, and means to the contracting parties more than the mingling of two immediate souls, but those who have become the relative of husband or wife to you at any time.

And next in consideration is the species of inheritance, embracing misfortune and disease that result from taint of blood or mental influences operating through impressions made upon the mind of the mother from accidents or shocks. A child may be born an idiot or deformed, not because either parent or ancestors were affected in that way, but because of the influence of some severe mental shock received by the mother during her pregnancy. Again, a child may be born an epileptic, not because the ancestors were so, but because the father or mother at the time of the intercourse that resulted in conception had been intoxicated. This cannot be classed as hereditary, as it did not exist in the parents and of course, could not be transmitted to the child. The effect of inheritance can be seen as much in the evil qualities descended as in the good ones. Some of these we will consider separately.

Irishmen are known by their irate, irritable and excitable nature, while the English are proud, persistent and domineering ; Germans, plodding and honest ; Frenchmen are ambitious and ornate ; Italians, musical and love detail in art ; Spaniards are proud, tyrannical and deceitful ; Austrians, conservative ; Russians, patient and pious ; Tartars, fierce and cruel ; because these peculiar traits have been transmitted from the beginning of their nations.



John Rogers was a religious radical, and all of his descendants are even worse, in the thirteenth generation being out and out radicals.

**Mental Peculiarities** are seen daily. Illustrations of these can be seen in the devotion and song of the African; revenge and deception in the Indian; sensuality and superstition in the Malay; invention and domineering in the Caucasian. All Jews inherit money-making and financeering from their ancestor, Abraham. This trait is more marked in them than in any other race. There is none so rich as Rothschild, and none who could have thought of cornering all the corn in the country, storing it up in times of plenty, to be sold in a time of need, with a return of a thousand profits, but Joseph, a descendant from Abraham, and he was the richest man of all the East and has transmitted his special mental traits to his descendants to this day.

**Longevity** is said to be associated with great physical vigor. Great men have a vigorous constitution and sometimes live to a very old age. Physical vigor is a privileged possession in some families.

Lord Wellington's relatives were all healthy and active at the age of seventy-five and lived on much longer.

Dr. Mott at the age of eighty wrote his sermons on temperance. O'Connell's ancestors exceeded one hundred. Burns, the poet, is said to have inherited his great talents from his mother, and she lived to a great old age.

Walt Whitman also lived to a great old age. The Adamses all lived an active life for eighty years, and all of the descendants are long lived, some of them filling positions of prominence, but as a record breaker for longevity alone, Thomas Parr exceeds them all, having lived to the age of one hundred and fifty-two, and died during the reign of Charles the First. (This being vouched for by the famous physician, Dr. Harvey, who discovered the circulation of the blood.) He left a daughter who lived to the age of one hundred and twenty-seven, and his grandson lived to the age of one hundred and three.

The mother of the Rothchilds exceeded one hundred. Washington's mother died at eighty-five.

Age is inherited from the father, as it can be proven in the lower animals.

**Great Talents and Longevity** frequently accompany each



other and are transmitted, for the reason that physical vigor, which causes longevity, is indispensable to that sustained brain action necessary to become and remain great.

**Fertility** is an inherited trait. Aaron Burr's ancestors and relations are almost as sensual as himself.

The children of prolific parents are always prolific.

In 1852 a man eloped with a sensual woman, he then having three wives living, and all of his relatives and descendants are sensual.

Some of the French are remarkably prolific. One woman was confined ten times in fourteen years, and at her last confinement gave birth to three daughters, who all lived, married and had large families.

Cervius Dometius was one of the worst of men ; he was the father of Nero ; while his father, Lucius Dometius Enohardus, was haughty, proud, cruel and revengeful.

Vitellus, the glutton, was also an ancestor, and Agrippina, his mother, murdered two children to place him on the Cæsarean throne ; and his great-grandmother, Julia, daughter of Augustus Cæsar, was the procreator, and Cæsar the author, of all these vices ; and Nero looked like Cæsar, and inherited the same kind of passions as his ancestors.

**Combined Excellent Mental Traits** in parents redouble in progeny. The same form, shape and size of brain can be transmitted. Benjamin Franklin is an example of this kind. He had a strong, sensible, intelligent father, while his mother was both deep and brilliant.

George Washington's paternal ancestors were pre-eminent through ages for talents, kindness and worth.

Patrick Henry's ancestors on both sides were distinguished, being English historians.

**Two Bad Parental Traits** make the children worse, as we have shown in the case of Nero. A woman who was amorous, and her father being a murderer, inherited and transmitted both traits, and she had a sister as bad as herself. If one parent be consumptive and the other dyspeptic, the children are both, and do not live long.

**Extreme Power** in both parents sometimes dwarfs progeny and make children deficient in this excessive attribute.



**All Parental States** are stamped on offspring, as like begets like, and there is nothing truer than the saying "Blood will tell." This law was well known to the ancients, for Laban selected all stock that were ring-streaked, speckled and spotted and separated them the distance of a three days' journey, and then agreed to give Jacob all those that were born with any rings, streaks or spots ; but Jacob had studied nature well, and knew that only those males that were strongest would be permitted to propagate. He also noticed that the stronger ones always stayed around the watering places and fought off those that were weak ; and he took advantage of this fact and peeled the bark off of all the small trees and saplings, and also peeled sticks, so that they would be alternated with white and green, and laid them all around the watering places, so that when the cattle came to partake of the food and drink that was provided in plenty, and they felt comfortable, they would procreate. He also knew that the weak begat weak and the strong begat strong offspring ; so that when he saw the strong about to commence the propagating function he would place the peeled, streaked rods before them, with the result that all the strong increase were streaked, spotted or speckled, while those that were weak (because he would not place the rods before them) were all of one color, and were Laban's. This proves that the existing paternal state overrules even hereditary qualities, and mottles the young of the unmottled. It is also well known that all animals exercise their strongest functions prior to or during their creative period, as all running animals furnish good examples.

Female deer, when thrown into sexual excitement, bound off into the woods and the males follow closely in pursuit until the whole running muscular system are wrought up to their highest pitch, short of fatigue, and unite in order to stamp this running state upon progeny.

Cats and all-night animals procreate in the night, and as their prey is nocturnal, so are they, and obtain their food by biting and scratching, therefore they bite and scratch most at this time. Also, all powerful animals put forth an immense amount of power at their creative altar, in order to impress it upon their progeny. Water animals procreate in the water, and can not obtain the proper position without it. And man, the highest of all earthly beings, furnishes the highest illustration of the law. All



of his original elements are transmitted, while all existing parental states are also incorporated.

Children of the same parents are widely different in many respects, as the parents were in an entirely different state during the time of creation. The father, as we have said, furnishes the child and the mother nourishes it ; therefore, the father must impress on all the offspring, such traits as resemble him most at the time of offspring, while the mother's influence must be continued longer ; therefore, maternal states effect progenal creation, and her merely temporary states are written right into the original mental and physical qualities of her offspring ; then how much more must strong impressions affect it ? All mothers should have it deeply impressed upon them, to ever remember that all their states of mind and feeling will be faithfully reproduced in their children, to remain there forever, growing clearer and deeper as their existence progresses.

**Maternal Marks and Deformities** also illustrate this law and go to prove that the state of the mother's mind and health at the time of carrying children, do actually change and distort even the child's bodily shape, as well as affect the mind. Many mothers can produce evidence of this character.

It has been said, and with some degree of truth, that at the time the mother becomes frightened, the place she touched her body, a mark will appear, but science furnishes another example of the cause, and with a reasonable degree of certainty proves that all marks are caused by some remaining part of a previous conception remaining in the uterus and at the time of conception, the membranes that form the outer surface of the body and uniting in front to form the stomach, face and other parts (as shown in the part dedicated to embryology) are then incorporated into new beings and frequently take a new growth, forming tumors, moles, etc., or twins may form, and one die and become part of of the other. Thus we have two reasons for this condition, notwithstanding this effort of science to disprove a principle, it is equally certain that parents can have the kind of children they desire, simply by doing those things they desire in their children.

**Maternal States** affecting offspring, much depends upon the food the infant receives, but much more depends upon it being fed mentally, and during this time all its food must come from



the mother, therefore, if the mother's physical food be poor and insufficient, the embryo will be poor and weak.

If the mother's mind be weak, dull and obtuse, it will be almost impossible for her to bear smart, strong-minded children, even if the father is highly mental and stamps his cerebral image upon them. Their minds must be fed daily with appropriate mental pabulum, or become dwarfed, hence superiority in both becomes necessary. If a mother while carrying a child, displays combativeness, her child will be more combative than she or her husband, but should she be placed under the influence of prolonged religious excitement, her child will be more pious than she, and if her benevolence be wrought up, her child will have a proportionate amount of Godliness, and so as to other traits, such as fear, devotion, inquisitiveness, vanity, amiableness and all other temporary characteristics.

Hagar's hateful state of mind, while carrying Ishmael, has stamped upon the Ishmaelites the hatefulness and ferocity so characteristic to them. So Napoleon's mother stamped upon him those martial traits that none of his race since have ever shown; she, it is said, while carrying him riding, and managing her queenly charger, mingled with the army, daily giving commands and guiding them, thereby stamping upon him these same traits.

**Bad Tempered** and cross children are caused by maternal irritability and in order to correct it, the mother should first secure that peace and repose of mind that is the opposite. These children cannot help being cross. It is as much their nature to be cross as if it was a part of their physical being.

**Vitality** should be cultivated with mothers, so as to impress it. Always remember that man is an animal, and in order to become strong mentally, we must first become vigorous and strong bodily animals, and all children worth raising, must possess animal vigor.

Without it they can never attain, do or enjoy. To become giants intellectually, they must become giants physically to support the gigantic brain. Most fathers of to-day, are overtaxed with business struggles, and mental worry, while mothers become excitable by reading exciting literature and keeping their nerves in state of tension, and that never fails to produce a nervous child, and unless this great evil is removed we will soon degenerate into



a race of nervous, dyspeptic and degenerated people, therefore, prospective mothers, should see that their health be as perfect as possible, so that they may have a great deal of vitality, during this period to bestow upon their children.

How many mothers, by neglecting these facts, have borne poor, little, puny children, with scarcely enough vitality to resist the effects of a common cold.

**Sleep during Gestation** is of great importance, as it promotes vitality; therefore, sleep by night and lounge by day, with proper food and breathing, will do much towards producing healthy, strong children, and will help you through your labors; therefore, whatever you do, keep well slept and rested, allowing nothing to worry or exhaust you. Sleep is a natural condition to bearing females, and nature demands that you take all the rest you can; if your other children cry, get a nurse, or let some one else take care of them.

Neither should you take care of or wait upon the sick, not only from the sympathy you bestow, but from the fatigue it is sure to bring, and then again, you owe a duty to nature, to bring forth no tired, worried, feeble or sympathetic children.

**Muscle.**—It is well to take plenty of exercise; exercise builds up the normal health, and at the same time transmits muscle. Without muscle and body, a good sized brain will be weak, but if a good large brain is associated with strong muscles, it will be a powerful combination. The mother may be strong and well proportioned, but she should take exercise. Her child will have no less muscle than she, so walk, romp and do all kinds of exercise, or gymnastics, and work even will aid you. Not running a sewing machine, but long walks, or even heavy work, and should your skin be naturally weak, you can quicken it in yourself as well as the offspring, by friction and right bathing; so every female should study her weakness, both mental and physical, during her bearing period, and educate and train herself to overcome them, in order to endow her offspring forever.

**Children as we desire them.**—By studying the laws of nature, it will be seen that we can produce the kind of a child we desire.

As a builder builds a house—has his plans beforehand, so should we in producing our children, and we can just as well produce a poet, an orator, writer, artist, mechanic, business man, or beauty, or all combined at will. You may say, “How can this



be? ” We answer by saying, “ Study the laws of nature and act accordingly.”

**Poet, Orator or Writer** can be produced at will, as the following will show. A mother desiring to have a son who would be endowed with oratorical ability, when she found herself likely to become confined, began to cultivate in herself these traits, with a view of producing an orator ; she therefore bought books and read as much as possible of classical works, attending at times, church, listening to every good speaker everywhere—at the church, legislature, bench and political rostrum, and with the happy effect of having her wish fully gratified in having a son who attained notoriety as a speaker.

**Artists** can be obtained in the same manner, by living among fine art, visiting art galleries, looking at fine pictures, paintings and drawings, and keeping the mind continually on art and artists.

**Writers** are produced in this manner. Shakespeare, Walter Scott and Byron, were born of women remarkable for their vivacity and brilliancy of language. A mother who carried a child while she wrote articles to make a living for herself, children and sick husband, begat a son who was remarkable for wit, ideality and sublimity, all in excess of his mother, and himself became a writer.

There can be no question that the cultivation of any power of the parents’ will contribute to the production of offspring improved in some particulars.

**Maternal Study** before the sixth month will be of little service, as the child’s brain is not developed sufficient to receive impressions, but the three months preceding delivery will greatly improve the intellect.

**Sweet Loving Children** should be cultivated by parents loving the new being before it is born. Children are the gifts of God, then we should love them as God’s, and as they are a part of ourselves, it is as much a duty to love them before they are born as it is afterward, yet while cultivating a loving disposition do not let them degenerate and be cowardly but rather cultivate a lovely spirit.

**Courage**, is a good quality and only those who possess it can succeed. “Nothing risked, nothing gained,” proves this.



In men, a fighting spirit is much better than a cowardly one. The new being will have to overcome obstacles and opposition from every source, and nothing will assist so well as a good amount of natural courage. Mothers to overcome this, should avoid all trouble, fear and worry and should not borrow trouble. Let no fears of husband, children or your approaching confinement trouble you. Worrying over it will not better it, and can only do harm in impressing nervousness, skittishness and a frightened, fussy cast of character, so much despised by men.

**Beautiful Children.**—A beautiful form and face is transcended from parents and are characteristics of certain families.

Alcibiades, the handsomest of the handsome among the Greeks, descended from parents remarkable for their beauty.

They so well knew this law of nature, that they passed a law compelling the selection each year of the most beautiful of both sexes and compelled them to marry.

In order to perpetuate the type of their beauty, they also early realized the influences of surroundings of prospective matters and everywhere were to be found statuary of the beautiful forms of men and women. The Romans well knew this, and history speaks of a certain deformed magistrate who begat beautiful and perfect children by keeping figures of beautiful faces hanging on the wall. He also placed three statues, representing the most perfect specimens of art on both sides as well as at the foot of the maternal couch. Irregular features are often transmitted from parent to child through many generations, as can be seen in most families of note. The aquiline nose is inherited in the Bourbon family. A peculiar under lip is inherited in the house of Hapsburg.

**Neck and Limbs.**—The length and form of the neck, as well as the height of the body, are frequently hereditary and it will be frequently seen in the offspring.

The union of two tall persons produce tall children and small persons, small children. The father of Frederick the Great secured a body guard of very tall men by permitting the guards to marry only women of very tall statures.

Obesity as well as leanness is hereditary, apparently in families at about the same age in each successive generation, but both are classed as diseases and are amenable by treatment.

**Complexion** as well as the different qualities and forms of



integument are inherited. Brunettes pro-create brunettes and blondes, blondes, while union in marriage of a blonde and a brunette will result in an intermediate shade in the offspring, but the complexion is largely due to the father and it will be seen that the offspring of a black father and a white mother is much darker than the descendants of a white father and a dark mother. It will be remembered that the father furnished the chit, while the mother nourishes it, and this will be sufficient reason for complexion following that of the father. A black hen frequently lays white eggs, and other reasons equally as good, is that the dark mother sees only the white skin of the father during the creative act and therefore makes the child light, while the white mother sees only the dark skin of the father and impresses the dark skin upon her offspring.

**Physical Qualities.**—There is a general tendency upon the part of the father, to transmit the external appearance, configuration of the head and limbs as well as peculiarities of the senses, the skin and general condition, while the size of the body and the constitution and temperament are derived from the mother. Here again our theory proves good. The chit being from the father is like the father, while being carried and nourished by the mother, it derives its size from her, and the mental expressions being modelled during the last three months of uterine life are most like the mother.

We have shown in another section that food has an important influence upon the size and complexion of the child, coffee drinkers having dark skins. Children who nurse milk from small mothers develop small bones and muscles, while those nursing from large mothers or from cow's milk are large and strong, and for this reason, a mule being the offspring from an ass further takes the general outline from the father and nourished by a mare, takes on the size and other characteristics of the horse, while on the other hand, the jinny which is the offspring of a stallion and a she ass is in fact a modified or dwarfed horse and having the general configuration of the horse, but very much smaller in size, being the result of nourishment received from a smaller parent.



## DEFORMITIES.

Deformities are undoubtedly transmitted to the children sometimes for generations. There are one or two families in Germany who pride themselves upon having an extra thumb; and there is an Arab whose ancestors from time immemorial have been distinguished by having a double thumb upon the right hand.

Darwin refers to many instance in which club feet, double joints and hare lip were transmitted. An acquaintance of the author, a medical student, could dislocate the hip, shoulder or knee joints at will, as could his father, brother and sister.

Another had double big toes, inherited from his father; the extra members were removed by a surgical operation, but the deformity was reproduced in the son.

**The Influence of Fathers over Daughters; of Mothers over Sons.**—Each parent exercises a special influence over the child according to its sex.

Daughters receive from the father the form of head, shape, size and general character of the chest and upper extremities, while the lower portion of the body and extremities are transmitted by the mother.

Sons derive from the mother the shape of the head and the shape of the upper extremities, and from the father the shape of the lower limbs. This arrangement of nature accounts for the sons of great men not resembling the father in attainment and for the daughters being nearest the fathers in intellectual attainments, also for the grandsons showing special mental traits, and it also solves the problem of great men springing from seemingly obscure parentage; therefore, the mothers of nations, though unseen, unheard and unacknowledged in the legislature, determine in this subtle manner, the character of the sons.

All women who have been celebrated for their intelligence and genius, have but reflected the genius of their fathers, but transmit it to their sons. History proves this law.

The daughter of the Roman Emperor, Caligula, was as cruel as her father.

Commodus inherited the vices of his mother, while Marcus Aurelius inherited the virtues of his father.

Arete, the most celebrated woman of her time, on account of the great extent of her knowledge, was the daughter of the distinguished philosopher, Aristides, a disciple of Socrates.



Cornelia, the mother of Gracchi, was a daughter of Scipis.

Charlemagne shut his eyes upon the faults of his daughters because they reflected his own.

Tamerlane, the greatest warrior of the fourteenth century, was descended from Gengis Kahn, the Asiatic conqueror by his mother's side, and Gengis Kahn had for his mother a warlike woman.

Catherine de Medici was as crafty and deceitful as her father, but more cruel and crafty. Her two sons, Charles IX, who shot and burned the Protestants, Henry III, who was assassinated by the Guises, were worthy descendants, while her daughter Margaret of Valois recalled her father by her gentle manners.

Burns, the poet, Ben Johnson, Goethe, Walter Scott, Byron, and Lamartin, were all born of women celebrated for their veracity and brilliant language; while the cruel deeds of Alexander VI, the records of which will ever stain the pages of history, are only rivaled in atrocity by those of his children, the infamous Borgias.

Arete, Hypathia, Madam de Stael and George Sand, all had for fathers, philosophers.

Byron attributes his melancholia to his mother, as her father is supposed to have committed suicide, and is said that he resembled his maternal grandfather more than his father's family.

Beethoven had for a maternal grandfather, an excellent musician. Moliere had a daughter who was like him in her wit and humor. Mozart received his first lessons from his mother.

Numberless composers have descended from John Sebastian Bach, who was a noted composer and unrivalled performer on the organ.

Those who have musical talents, always inherit them, and it is useless for parents to try to educate their growing children to become great composers and musicians, unless they themselves have some musical talents. What we have said in regard to influences of parents over children, we believe we have fully proven, but by examining the ancestry of noted persons, it will further bear out this law.



## INFLUENCES OF EDUCATION OVER INHERITED QUALITIES.

Everything we have at birth is inherited from our ancestors, but education plays an important part.

A good quality can be improved, while a bad one can be made worse or better, or at least modified by training.

Virtues implanted by nature, may be lost during the early plastic days of youth from bad associations and habits.

**Education** can be invoked to prevent the transmission of undesirable traits, or to secure good ones.

By educating ourselves to an extent, we can secure those virtues in our children, and during childhood by good associations and better examples in ourselves, we can have our children to be good, and even better than ourselves. The mother's mind during the last three months of pregnancy has much to do with the mind of the child ; and this same education by mothers before birth, generation after generation, exerts an influence over descendants that will gradually become stronger and better and will be next to instinct to the offspring ; yet Mr. Gulton's theory, that we are but barbarians at birth, as we want to dig in the ground, and thus imitate our barbarian ancestors, is but a part of the truth. They were barbarians so long that it has become instinct with us, but the children of this day are not so barbarous as they were. You say, "How do you account for the increased number of murders then?" You forget that this is an age of education.

Our ancestors had but few newspapers to parade the crimes of the day before the multitude ; then again, they were proud of large families. They are educated in crime by reading the daily papers to-day, and mothers stamp murder upon the minds of their unborn children, by attempting abortion, and by reading the daily publications of crime. Every minister should cry out against this education now or never, or soon we will become a nation of barbarians as bad as our ancestors. If more scientific than they, we still have the murderous minds.

## MUTILATIONS ARE NOT INHERITABLE.

Mutilations or alterations from injury or disease during the life of either father or mother are not transmitted to children.

Alterations in contour of the human body have been practiced



for ages by some tribes of Indians and savages, without at any period causing the least malformation of their offspring.

Different races of savages have knocked out their front teeth, punched holes in their nose, elongated and made immense holes in their ears and lower lips, cut off the joints of their fingers, cut deep gashes in their bodies and flattened their heads, and yet there is no proof that these mutilations have been inherited.

**The Comprachicas**, a strange association of men and women, existed in the seventeenth century, and made a business of buying children to make them hideous monsters.

Occasionally we hear of this peculiar association existing and carrying on their nefarious work to this day. Many a museum freak is the handiwork of their art. Victor Hugo speaks of how they take a face and make of it a snout bent down; knead the physiognomy, distort the eyes, and in other ways distort and disfigure the human body.

We have no record that these deformities were reproduced. The author remembers a number of persons who had lost limbs, or, from disease, their joints had become deformed, and they all have perfect children.

Hare-lip and other deformities existing at birth are not due to inheritance, although they exist in the parents.

By consulting the chapter on embryology, it will be seen that the membranes, when they do not unite as they should, leave a space in the lip and palatine bones; thus forming what is known in after life as cleft palate, hare-lip, etc.

## LATE MANIFESTATIONS OF INHERITANCE.

By late manifestations of inheritance, we mean those diseases, as well as peculiarities of mind and physical condition, which manifest themselves at about the same age in the offspring as in the parent. For instance, grayness and baldness will appear much earlier in some families than in others; or a peculiar formation of the skin, sometimes a horn-shaped excrescence, appears at about the sixth or seventh month in successive generations.

There are cases on record of a peculiar growth of the skin appearing in the father at the age of six years, the hair growing on the ears and entirely covering them. His three sons had the same hair growth to appear at the same age, while his daughters' began to grow much earlier, and in both generations the teeth



appeared late in life, the permanent teeth being deficient. Some families have the hereditary gray hair appearing in some generations at about the age of twelve years. A family by the name of Sparks have a peculiar curling of a lock of hair on the forehead. The author's family inherits large front teeth, with a late appearance of the molars, the permanent teeth being very strong and lasting until old age.

**Insanity** is hereditary, and it often appears in successive generations at the same age. In a family by the name of Carpenter, the mother was declared insane at thirty-six, her daughter at thirty-four and her son at thirty-five.

### INHERITANCE.—HOW TO AVOID.

Diseases are transmitted from father to daughter and from mother to son.

By studying these facts, it will be seen that those diseases which the predisposition alone is inherited, and which break, and only after a lapse of years it will be possible to prevent the predisposition from being developed in to positive disease.

For instance, the inherited tendency to consumption remains dormant in the system until about the age of puberty, or later, thirty-six, or forty-five.

Therefore, by the proper use of a diet in which animal food forms a large percentage, and by systematic exercise in the open air, the practice of long exhalations and filling the lungs full of air, and then bringing the hands and arms forcibly against the chest; warm, comfortable clothing, preventing and avoiding exposure during the changeable seasons of the year in an equable climate, we can often arrest the development of the disease.

Prevention, in such cases, is always better than cure.

When there is reason to believe that an individual possesses an inherent tendency to any disease, he should examine into his constitution thoroughly, and observe the laws of health and such special measures as will be indicated under their particular conditions, in order to effectively ward off their appearance.

Sir Benjamin Ward Richardson gives the following sanitary decalogue for the prevention of tuberculosis. First, pure air for breathing. Second, active exercise, outdoor as much as possible. Third, uniformity of climate. Fourth, dress that will sustain uniformity of temperature. Fifth, careful regulation of the hours of



rest by the sunlight. Sixth, outdoor occupation. Seventh, amusements that favor muscular development and sustain healthy respiration. Eighth, cleanliness in the broadest sense. Ninth, the avoidance of the ill-effects of cold. Tenth, an ample diet, with a full proportion of the respiratory foods.

### BOYS AND GIRLS AT WILL.

For years this question had been asked without being satisfactorily answered, until a professor in Scotland solved the problem by studying the lower animals.

He noticed that if the female took the male at first signs of heat the offspring was a female, and that if the female took the male at the end of the heat, the offspring was a male.

It was also noticed that queen bees lay female eggs first and male eggs afterward; and the first laid eggs of a hen produce female chicks, while the last eggs produce roosters.

The medical and surgical reporter quotes a case of a physician who successfully produced boys or girls at will.

The "Lancet" has stated that in the human female conception in the first half of the time between menstrual periods produces female offsprings, and male in the latter, and when a female has gone beyond the time she calculated upon, it will generally turn out to be a boy.

We can safely set it down then that the professor's theory has proven correct and that whenever intercourse has taken place in from two to three days after cessation of the menses, girls are produced, and whenever intercourse has taken place in from nine to twelve days after the cessation of the menses, boys are produced. By carefully keeping a record of the time of intercourse, we can predict the sex of the child before birth with some degree of accuracy.

### CAN CONCEPTION OCCUR FROM A FIRST CONNECTION ?

This is a question often asked, and a great many times it has been a question for the courts to decide, but science has proven beyond a reasonable doubt that one connection will be sufficient to cause conception to take place, provided intercourse does not occur during nature's sterile period, namely, from the twelfth to the sixteenth day after the menstrual period, and even at that



time healthy, vigorous females are not safe, because intense sexual excitement is liable to draw a fresh egg at any time, but a female who conceives with difficulty will usually be in little danger, between the eighth day and after, and two days before the beginning of the menses.

Another reason why first connections are not always fruitful is because of the difficulties sometimes met with in first intercourse from an imperforated hymen, smallness of the vagina or spasmodic contraction of the vaginal muscles. There is a case on record where a young married couple found it impossible to have intercourse from the above-named causes, and, after repeated attempts and complete failures to complete the act, decided to have the difficulty overcome by chloroform, and connection took place at that time, successfully followed by an impregnation.

#### CAN CONNECTION AND CONCEPTION TAKE PLACE DURING SLEEP, WITHOUT THE KNOWLEDGE AND CONSENT OF THE FEMALE?

This question, like the former one, has been decided time and again by the courts in the affirmative.

Females have been violated during sleep and have not known it; but the author believes there must have been a malformation existing in one or both of the persons, or the female was under the influence of hypnotism, or some narcotic drug.

There is a condition known as catalepsy, where the female is perfectly paralyzed, so far as motion is concerned, and females, when completely under its influence could be buried alive and not be able to wink an eye or move a muscle to prevent it; and while under such an influence it would be possible for anything to take place. Cataleptics know all that goes on about them, but are unable to help themselves.

But virgins in a perfectly healthy nervous and physical condition could hardly have a perforation and completion of the sexual act during sleep and not be conscious of it. Yet it is well to remember that females have been known to have the vagina developed to such a degree (even as early as ten or twelve years) that intercourse could take place without violence. Then, again, women have had repeated intercourse, as well as conception to take place, and preserved the hymen unbroken until the time of delivery.



## THE WIFE'S VACATION.

When you take your vacation during the heated seasons of the year and go to the mountain country or sea shore and for some reason your husband decides to stay at home, do not have your housekeeper remain with the husband, She may become afraid to remain in the house alone with a married man. If it is convenient, arrange it so that one of your trusted friends can stay and keep house for him. He will be lonely enough on account of your absence and will require the company of some good pure women, and the more company he has the better. Your neighbors will not entertain him as much when you are gone as they would when you are present. They seem to think and expect him to do all sorts of unreasonable things. They watch each other and him and should one of them speak or act friendly towards him or request him to call and spend the evening, they are not slow to wag the tongue of gossip and even scandal. Therefore if you can arrange it so that he will have plenty of good female company while you are gone, so much the better. But should you not be able to leave him company that will entertain and amuse him, have him go to the hotel, for if you leave the servants they will be sure to freeze him out and use every means to make him uncomfortable and out of place. Married men are not such horrible creatures when their wives are away. In fact, they are not so bad as single men; surely no worse. Therefore, a man who has been used to the company of a good wife, to be left alone and have servants and neighbors act as if they thought he was going to steal something, makes him hate women. At least, he will lose respect for those who guard well their character by having nothing to do with him unless in the presence of other women, and then only in a cold, guarded and indifferent manner.

Men whose wives are away from home soon get to learn that they are not wanted around their home and they drift to the saloon, to the club, or walk the street where their company is sought and more congenial. Often men form acquaintances and contract pernicious habits which stick to them throughout the balance of their days, while their wives are away at some pleasure resort.

You women, who have temporary widowers for neighbors, do all you can to make it pleasant for them. Men are animals,



and even animals appreciate kindness. Then, do all in your power to keep this animal in pure, wholesome atmosphere by keeping him entertained. If he finds amusement about his home, he will steer clear of the saloon and the brothel and will be a happier and better man. When his wife returns, he will appreciate her company and feel grateful to you as a neighbor. But if you can not entertain him, at least speak to him if it is but to inquire how his wife is getting along and should he flirt a little, be blind to it. Most men flirt when their wives are present and when he is alone, he is sure to flirt a little, but if he is amused there will be no harm done.

Girls, if it so happens that you are left in the house with a married man whose wife is away, don't get scared ; he is only a man, and a married man at that ; he won't go crazy over your beauty or shape ; he has seen others just as good looking as you are, and perhaps some with much better shapes ; he will do no extraordinary things ; he may think his wife the most beautiful woman on earth, and perhaps won't care a straw for you ; therefore, don't run all over the neighborhood to get three or four persons to stay with you ; he may have been alone many times, and perhaps could remain alone and get along better without than with you. The fact is, some men prefer to be alone when their wives are away. Remember one thing, men will always keep their place if women keep theirs, and act like ladies ; no man will be mean enough to take the slightest advantage, and the only protection that a woman will ever require against a man, is a pure and chaste mind. Let her keep her mind pure, and a man will keep the proper distance.

But there is a difference between purity and coldness. Purity is love, while coldness will develop hatred. So, entertain him. If you play, play for him ; if you sing, sing for him, and do all in your power to make his home pleasant, and while you are doing this for your friend, you will be learning how to entertain your own husband, if you are so fortunate as to get one. Men will appreciate these attentions from you, and they will aid you in finding suitable young men for companions, and by their praises may find you a desirable husband.



## BEER DRINKING.

This common and popular practice directly or indirectly is responsible for the great increase in those diseases common to the kidneys. An accepted English authority claims that by the use of bread and drinks composed and manufactured from wheat, barley corn and the cereals generally causes almost all of the diseases of the kidneys. Statistics prove that Bright's disease and diabetes are more common in large cities and towns than in the country, and in cities with a very large German population the mortality from this source has increased almost one third. Prof. Bartholo, in one of his lectures in the Jefferson College hospital, said that beer-drinking Germans nearly all have some disease of the liver or kidneys, caused by the action of the adulteration by hemlock, aloes and the action of the ferment existing largely in the barley, hops, etc., of which the beer is composed, together with the enormously increased amount of ingested fluids and solids. He spoke of a case under his care, who drank as much as fifty glasses of beer per day.

The effect of beer as a simple tonic is no better than that of any other simple tonic composed of a small amount of alcohol, (beer contains about three per cent.) and bitters. Beer taken in moderate doses causes at first a feeling of fullness in the stomach, and a slight rise in the action of the heart, and in those unaccustomed to its use, a slight stimulating effect upon the mind, kidneys and genito-urinary organs. This condition lasts for a short time, from one half to one hour, then a period of depression follows, equal to the amount of stimulatives.

The effects of beer drinking, it will be seen, are but transitory and in order to keep up the feeling of well being or slight intoxication it is necessary to increase the amount taken. Beer has been recommended to cure all evils. It is supposed to cure the blues, melancholia, hysterics, dyspepsia, constipation etc.

Nothing could be so fallacious, and mothers who are carrying or nursing children, should avoid the use of all intoxicating beverages on account of the general action upon the child.

What the mother eats and drinks, as much as the state of her mind, affect her unborn and nursing child. The lacteal secretions are affected by emotions of different kinds and many a child has been made sick from nursing the breast soon after a shock or excitement experienced by the mother, and there are



instances where children have been kept in a state of intoxication for months by the mother drinking beer to increase the lacteal supply.

A notion that lager beer, ale, wine and alcoholic drinks are beneficial to nursing mothers, is a great error and can not be too severely criticized. The fact is, the mother is injured instead of being benefitted and if the child at the breast inherits this taste and dangerous habit from its mother it is almost certain in after years to form the drink habit, and it will be well-nigh impossible to overcome.

### SLEEP.

Sleep is a condition in which consciousness is lost and the body and brain can enjoy functional rest. In sleep there is a subsidence of the higher or cerebral functions and complete rest to the muscular system. Persons who lie abed all night, but do not get cerebral sleep, do have muscular refreshment or muscular sleep, and the muscles during this period are repaired and rebuilt.

Sleep is but a function; therefore any deviation from the natural condition of it can only be called "disorders of sleep." These are conditions of the brain and have received names which we must accept. Normal sleep is called somnus; absence of sleep is called insomnia; partial or imperfect sleep is called dreams, somnolentia, nightmare, etc.

**Normal Sleep** is a condition of rest that varies according to the climate, age, sex, occupation and race. Infants require from fifteen to sixteen hours of sleep out of the twenty-four; an adult should receive about eight hours' sleep, while the aged get along better with but six. Women, as a rule, require half or three-quarters of an hour longer than men. Some men require ten, eleven or twelve hours of sleep daily; brain workers require less than laborers. In cold climates, sleep is longer and sounder than in warm climates.

**Insomnía** is the absence of sleep, or insufficient and restless sleep, for a period of time. It results from a great variety of causes. Entire absence of sleep usually precedes insanity and accompanies anæmia and chlorosis, neurasthenia and other nervous troubles often being the most pronounced symptoms. Persons frequently say they have not slept for months. This condition



cannot exist, and by careful watching it will be seen that they have a sleepy or drowsy feeling, which is in reality muscular sleep. The length of time that any one can go without sleep is three weeks or twenty-one days, the same length of time he could do without food. Heart disease is a cause of insomnia, as well as any disease of the kidneys. Coffee, tea and cocoa drinkers and tobacco users suffer from nervous troubles, but especially from loss of sleep.

**Treatment.**—As insomnia is a symptom of some general disorder it should be treated in some such systematic treatment as we now prescribe.

**Drugs** to be administered for the purpose of causing sleep are camphor, cannabis indica, hyoscyamus, bromides, chloral and morphine. Chloral hydrate in doses of ten to fifteen grains, dissolved in water is among the very best of hypnotics, but it has an action upon the heart which should be watched. The bromides of soda or potassa in fifteen to twenty grain doses and dissolved in water and given three times daily is the very best sleep producer.

In insomnia, generally, the first and second nights will show but little improvement from treatment, but the third will bring sound and refreshing sleep. In alcoholic insomnia, the bromides are not sufficient to cause complete sleep, neither in the wakefulness of the insane will it be of much use, but here cannabis indica and hyoscyamus are best used in doses from ten to fifteen drops of the fluid extract, but this should be prescribed by a physician.

**Lupuline**—a preparation from garden hops, is a good sleep producer; the old-time hop pillows owe their hypnotic influence to the presence of lupuline. It may be administered in ten to twenty-five drop doses of the fluid extract, or grains of the solid extract be used.

**Beer, Wine, and Whiskey**, are remedies that cause sleep in mild cases of insomnia, but the danger of contracting the liquor habit is greater than the danger from insomnia.

There are cases where some noises will produce sleep better than medicines. A certain prince could get sleep only when riding upon railroad trains. A well-known author could get sleep only while reading some dull and monotonous book, and another by counting. A very good way to produce sleep is for the



patient to try to keep his mind and eyes upon his big toe or some other object at the foot of the bed. Hot hip or foot baths, or warm general baths, cold douches on the skin and cold water to the head and back of neck, are good hypnotic remedies.

**Massage**, in the form of rubber muscle beaters, or rubbing the limbs with a rough or coarse towel, together with light suppers and brisk exercise, will very often be efficient, while others will require a drink of cold water or a hearty meal upon going to bed in order to gain sleep. Keeping the eyes wide open and upon one object, is also a good plan.

**Magnetism or Hypnotism** are remedies lately coming into use to gain sleep. The method of applying this will be found in another part of this book.

Walking in the open air fast enough to cause profuse perspiration, and carried almost to the point of fatigue, is one of the best sleep producers.

## HEADACHE.

This is but a symptom of other diseases. Often it is the only symptom, or all that is known of a disease. It will be safe to say that two-thirds of the aches of the human body are headaches. It is a symptom of almost all the diseases of the human body.

**Diseases of the Brain** and of the spinal cord manifest themselves by headache, sometimes most persistently.

**Malaria** causes headache over the eyes, of an intermittent character.

**Rheumatism** causes a headache in the back part of the head ; so also does bad air and poor ventilation. From breathing air or sleeping in rooms where the air is close in the mornings headache will result, but will gradually wear away after exercise in the open air.

**Constipation** is also a very frequent cause of headache. It is a dull ache associated with neuralgia of the muscles of the chest and general inaptitude, quite often in women who are in the habit of drinking large quantities of tea.

**Uterine Troubles** cause headache, and a very distressing pain in the head is caused by ulceration or inflammation of the neck of the womb. This is not severe, but is almost constant, and is



limited to the upper portion of the head. It is usually accompanied by a tenderness of the abdomen.

Girls who suffer from delayed menstruation are frequently bothered with a throbbing, pulsating headache.

**Anaema**, or poor blood, frequently causes headache.

**Syphilis**, in the latent stages, causes headache, mostly at night, and may be either paroxysmal or continuous in character.

**Astigmatism** is of all causes the most common. Persons who have this deformity of the eyes will, upon using them for a time, strain them, and this is sure to result in a headache in the frontal region. While the eyes are at rest there will be no pain.

**Neurasthenia**.—Headache in the back part of the head is generally of neuralgic origin and is a constant symptom of neurasthenia. It is a dull ache, occurring mostly in the afternoon.

**Sunstroke** causes an ache in the head, which after a time gradually wears away. It is the severest when the patient is exposed to the heat of the sun.

**The Treatment** is prophylactic, as in other cases, to remove the cause. If this be constipation, exercise and diet will soon remove this. Astigmatism, combined or mixed with either far or near-sightedness can be easily corrected by wearing properly adjusted glasses.

**Sick-Headache** is caused by improper food, biliousness, anxiety or fatigue. A little care and watchfulness as to the daily habits will soon rid the patient of this common form. During the interval between the attacks it will be well to prepare the system and prevent any further sickness. The patient should avoid all rich food, pastry, tea and coffee—the two latter articles alone causing more headaches than anything else. Coffee is the worse of the two. Persons suffering from headache will do well to stop using tea and coffee for one month. Even in this short period of time there will be a noticeable lessening of the attacks. However, should there be no improvement in this length of time, there is probably something else causing the headaches. Emotion or excitement usually brings on an attack, so that the intervals may be prolonged by avoiding such a mode of living as will tend to excite and living a life of freedom and quiet.



**Tonics**, either of quinine, calisayæ, strychnia, gentian, etc., combined with a mild laxative, such as senna, cascara, rhubarb or dandelion, or small doses of salts, will be found most beneficial. The popular notion that all physics causes constipation, is erroneous.

Treatment of the attack differs according to the individual. Sometimes the patient can avert an attack by abstaining from food until the time for a spell is past. Others will find that the reverse—eating a hearty meal—will accomplish the desired effect. Keeping quiet and resting in a darkened room, a sound sleep, will often ward off an attack. Persons of sedentary habits can often keep away a bad spell of headache by taking some mild exercise; a walk, for instance, in the open air, will do much to benefit them. Patients who suffer from cold hands, limbs and feet, will derive quite a little benefit from a hot foot bath.

Purgatives will sometimes give almost immediate relief. The saline cathartics are by far the best.

Five-grain pellets of acetanalid will nearly always give relief in an attack, but the patient should lie down for half an hour after taking it, as dangerous heart symptoms may result.

Most persons have squeamish stomachs at this time, and the alkaline water, soda or caffeine, or citrate of caffeine and soda, drank while effervescing, will do much to “settle” the stomach. The patient should lie down and keep quiet. Hot and cold compresses to the head will relieve the intensity of the aching. The old but sure remedy of tightly wrapping a bandage about the head, is one which has held good too often to be scoffed at. To those persons suffering from headache, who are unaccustomed to the use of wine, whiskey, coffee or tea, moderate use of these beverages will often secure relief for the time being. For those whose stomachs will retain anything of the kind, bromide of soda or potassa is the best remedy.

Opium in any form should be avoided, as it does little good and is very likely to cause a desire for its use. The only time it might well be recommended, is for girls who have painful menstruation.

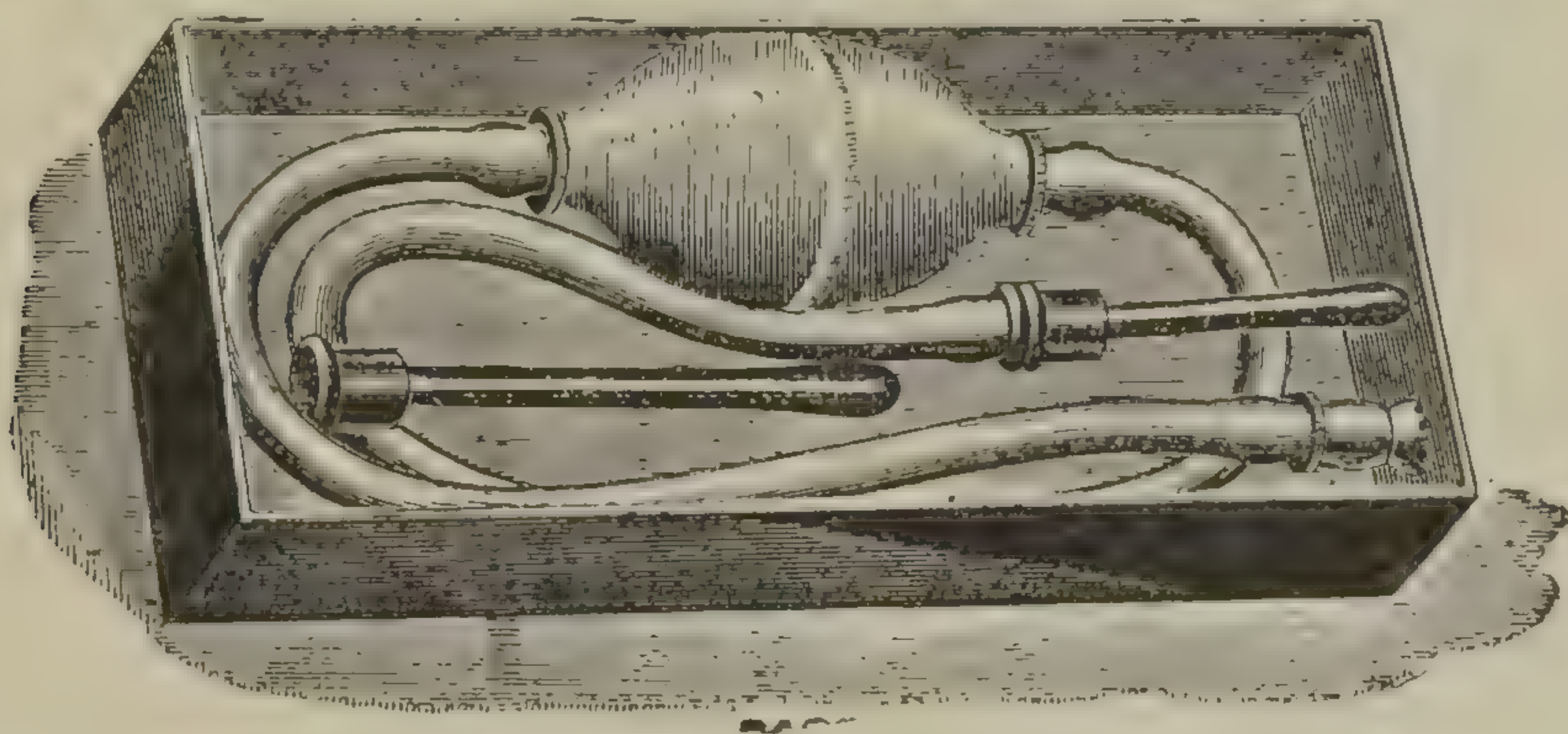
Fruit for the breakfast is one of the best known remedies for effectually preventing headache in those suffering from constipation.



## INJECTIONS AND IRRIGATIONS.

The use of irrigations or injections of plain or medicated water is very essential to health in both married and unmarried females. Even when there are no symptoms of disease or weakness of any kind, the use of the syringe once or twice each day, will do much good, and where there is disease or debility actually present, it is sure to be of the greatest service and often the only remedy necessary. Cleanliness is healthiness, and the frequent use of plain, warm water will remove caseous and leucorrhoeal secretions, which, if left remain, will decay, and its irritating presence will cause disease of the mucous membrane of the vagina. Even if there should be no disease result, the decaying secretions would leave an odor which is not in the least pleasant.

There are a variety of syringes and irrigators kept for sale in most drug stores, some of which are almost worthless. The most convenient, and at the same time the most useful, are the Household or Davidson Syringe and the Rubber Bag Irrigators. The



BULB SYRINGE.

Davidson syringe takes up but little room, comes packed in a neat pasteboard or wooden box that can be packed away in a trunk, or without the box, can be carried in an ordinary hand-bag. They are composed of rubber tubing with a bulb in the center, and by squeezing the bulb an almost continuous stream of water can be thrown into the vagina.

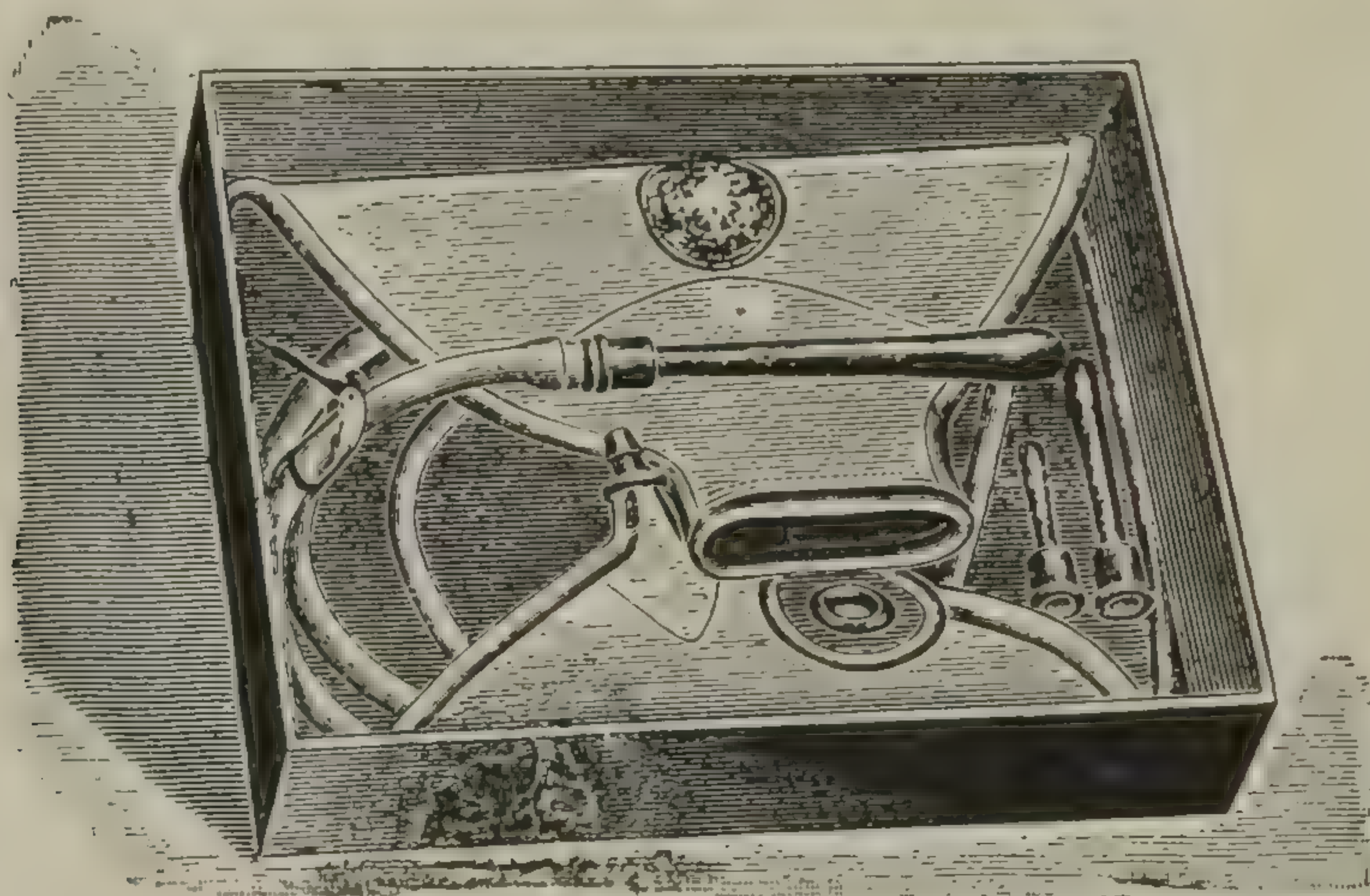
The rubber bag is next in point of convenience and in many diseases it is more useful than the Davidson syringe. The Davidson syringe gives force, while the rubber bag gives a steady and constant stream, and the same time considerable force. The bag is composed of rubber, and has an ear with a hole in it for the purpose of hanging on the wall, and at the bottom is a rubber tube



five or six feet long, with a stop-cock at the end for the purpose of shutting off the water. Either of the above-named instruments will answer any purpose where simple irrigation is required.

To use these instruments properly, a chair with an opening in the bottom can be used for the patient to sit upon, or she can simply stoop or squat over a basin to catch the water. The long tube is then gently and slowly pushed as far up into the vagina as possible, without giving pain, and in case the bag is used, the water is turned on and allowed to flow into and out of the vagina.

Should the bulb syringe be the instrument chosen, after



RUBBER BAG, SYRINGE AND WATER BAG.

inserting the tube, the bulb is squeezed with the hand and the water is thus injected with considerable force into the vagina. The quantity of water used should vary, according to the cause of the irrigation. If it be for mere cleanliness, one or two quarts of water, warmer than the room, or tepid water may be used. Very cold or very hot water should never be used for this purpose, nor should any fluid except water be used, in ordinary cases. There are times when it is best to entirely omit the use of these instruments. For instance, during the periodical sickness, or when the body is very much heated from exertion of any kind, or in case the body is very cold. When they are used at all, the water should be quite warm.

Injectiōns should be used with care, where there is pain attending their use. Some women after labor do not have as good contraction of the neck of the womb as they should and as the mouth remains open when the fluid is thrown in, it often passes through the neck and into the body of the womb, thereby caus-



ing uterine colic or contraction, and this sometimes results in serious trouble or disease. There is a syringe nozzle, which throws the water backward and not forward. It is intended to be used in these cases. They can be found in drug stores or manufactured at home by plugging up the end opening of the longer vaginal tube of the Davidson Syringe.

When it has been decided to use some medicinal substance in water, a pinch of powdered alum, or sulphate of zinc, or sugar of lead will relieve inflammation and stop the discharge. When there is any unpleasant odor, permanganate of potassa can be used in sufficient quantity to turn the water slightly red or light pink. This will remove all unpleasant odors, but care must be taken in using as it stains the linen.

### REDUNDANCY IN WOMEN.

Females are more numerous in all thickly populated parts of the world. In England, Wales and Australia, there are 105 women to 100 men.

In Sweden there is 110 to 100, and the proportion in all cities is even larger, as London has 115 women to 100 men, and in larger towns of Sweden, the population is 120 to 100.

While in America, the population is different according to the location. In the western and newly settled parts of the country, males are in excess of females, and in California there are three males to one female.

Nevada has seven males to one female ; Colorado, twenty to one, and the recent census of Illinois gives ninety-three thousand more men than women, while in the eastern part of the country in the New England states, there is a predominance of females over males.

In Massachusetts there are fifty-five or sixty-thousand more females than males. This is accounted for in the fact that women have no inclination to emigrate, and are not fitted to undergo the hardships appertaining to settling a new country ; also, during the war of the Rebellion, parts of the eastern country furnished men for both north and south. The city of Cumberland, Maryland, for a time after the war, had two females for one male.

It would seem from the above that there are more girls than boy babies born, but this is not true, as statistics show that there



are 113 boys born to every 100 girls. In the state of Rhode Island there were for three years, 107 boys born to 100 girls.

But nature has so planned it, that a larger proportion of male infants die during the first year of their lives, than females, and during the second year the proportion is nearly as great, and during the third and fourth year, the proportion is nearly the same; but from that time until the twelfth year, the proportion gradually increases in favor of the male, and from twelve until forty-five, the death rate is greater among females, but not sufficient to make the number of the two sexes equal.

The greater tendency of male children to die early is seen before birth, as there are more male children still-born than females. nearly three to one, and the term stronger sex should be applied to women, as they are physically stronger in early life, and succumb less readily to noxious diseases and influences.

The age of parents has an important bearing upon the sex of the child, according to statistics.

Seniority of the father gives an excess of male offspring, while seniority on the mother's side, gives an excess of female offspring.

It should be noted that in all civilized countries, the father is older than the mother, thus having a tendency to produce more male than female children, but the relative age is not a sole cause which fixes the sex of the child.

Climate exerts its influence, as in countries like Norway there is a constant deficiency of boys, while in other and warmer countries there is a deficiency of girls.

During and after great public calamities, as wars and epidemics of disease where there is a greater proportion of male deaths than females, there are more boys than girl babies born.

It is also well known that scholars and those who lead a sedentary life exert a large amount of nervous influence, beget more girls than boys. Old age of the father diminishes the number of male children among the offspring.

Food, temperature, elevation of abode, mode of life of parents, religious beliefs, rank, frequency of sexual intercourse all contribute to the disproportion of sexes.

The agriculturists of France have noticed that seasons have much to do with the sex of the offspring.

In warm, humid years there are more females born, while in cold and dry years, with mostly northern winds, there are more males born.



## HOW TO PROLONG LIFE.

Do you dread to die? Do you desire to live longer in this world than most mortals? If so, the question seems to be, how long do you wish to live? And this question is decided by the manner in which you live. Some persons live to eat, while others simply eat to live; others live to sleep, still others sleep to live. But to prolong life one must maintain a frugal diet and a perfect hygiene, or at least as near perfect as can be with our surroundings. As to surroundings, life in the country and quiet seems best suited for this purpose; as most of the centenarians are persons who have passed most of their time in the country in quiet. It has been said that life is but so many heart-beats, if this is so, then a country life with ordinary exercise will be found best suited to prolong life, as there will be scarcely any excitement. But a life in a bustling city, and living alongside of some elevated or electric railroad, with all of its attendant excitement, increases the number of the heart's action and thus indirectly shortens life.

**Climate** is another important factor in considering causes which have a tendency to prolong life. A climate which is neither too cold in winter nor too warm in summer is the best. The climate of central, southern and western Indiana seems to be one best suited to the human race, also North Carolina's climate seems to be suited for the purpose, as statistics show more centenarians in these localities than any other.

Pine forests seem to exert an influence upon the general health and thus prolong life.

By associating with young persons as in teaching school, or sleeping with them has an influence towards prolonging life which has always been known.

**Excitement** of all kinds should be avoided. Sexual excitement should only be occasionally indulged in.

**The Clothing** should be simple plain woollens in winter and cotton or linens in summer. Made up to fit loosely, the blanket and breech cloth of the Indian is all that is necessary, but our civilized state requires more than this, but in choosing the clothing, remember that it is only a means of comfort and not for fashion.

The shoes should be moccasins, or at least shoes that are long enough to admit the foot without any compression whatever.

**Sleep** should be taken whenever we feel like it, no matter



when it occurs yield to it, sleep two or three times a day if the brain requires it. The manner of taking it varies in different countries, but persons can and should do without the old-fashioned box beds, or for that matter all kinds of beds, as they are a great source of care, and are vermin and disease breeders. A simple pallet of blankets or rugs, with a slight elevation for the head the same as the Japanese and Chinese use is the very best form of bed, one that should be adapted by all races of people.

**Diet** is most important in prolonging life. It should be limited in both quality and quantity, as such things as bread, biscuit, pies and cakes are strictly forbidden ; so also is soda water, ice cream, or ice cream soda, and iced drinks especially; candies, sugars, honey, and all kinds of sweet things have a tendency to cause disease of the kidneys, and thus shorten life.

**Fruits** should be the staff of life instead of bread. But such articles as the meat of young animals and fowls, fish and poultry, can be taken sparingly up to the middle age of life, and when the body has attained its full growth, the purpose of food is merely to repair the waste of tissue, and any more than this amount will be a burden to the system ; then nitrogenous food sparingly taken, is the only food necessary.

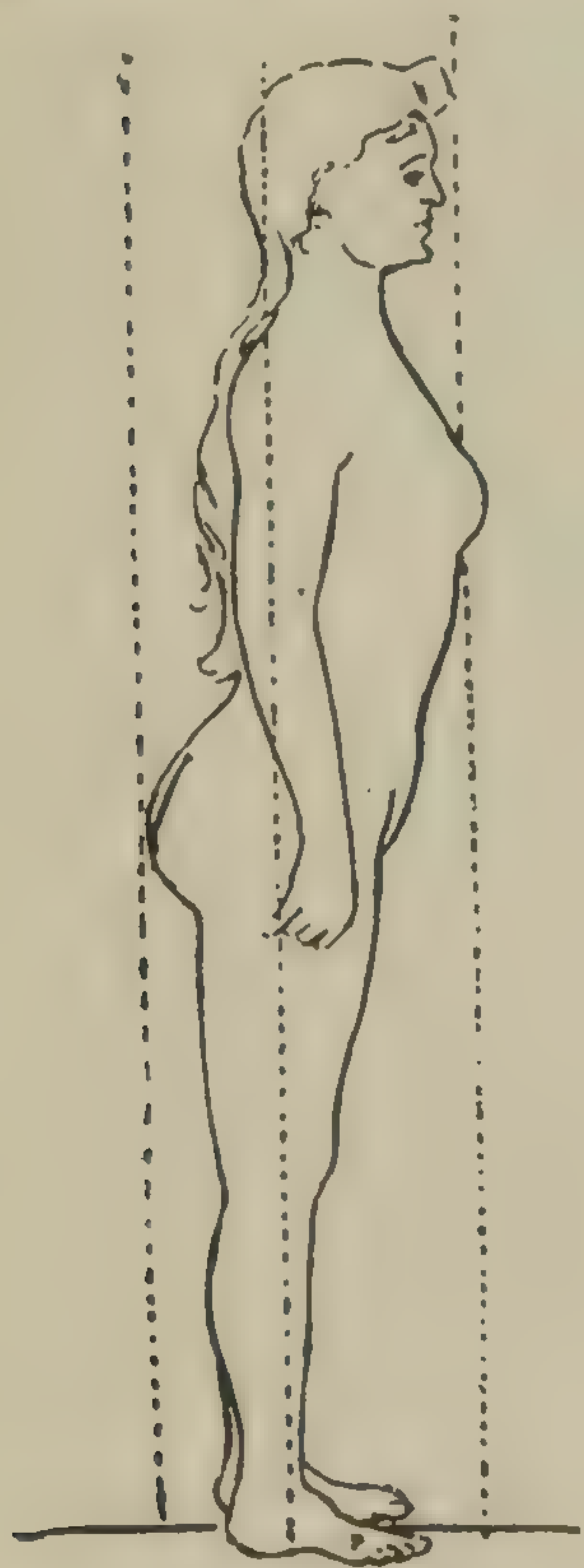
The drinks should be plain and simple ; no alcoholic beverages of any kind should be taken ; tea and coffee also is unnecessary and stimulating, and they should be avoided. Drink only rain, distilled, artesian or spring water. Those who wish to enjoy longer days, must also limit themselves as to the quantity of food taken ; appetite is the best safety valve ; as you are to eat only to supply wants, stop before the hunger is fully satisfied. In other words, live a life of half starvation, and you will add to your days.

### CORRECT AND INCORRECT POSITIONS.

The importance of correct positions in standing and sitting and the evil influence of habitual and continued strained or wrong positions upon the growing child is well known by teachers in the public schools and on account of the continued watchfulness of these teachers, has resulted in a nation of straighter and healthier men and women. The habits of children at school, leaning upon one arm, or turning one side to the desk in writing, stooping forward with elbows upon the desk, leads to lateral curvature of the spine, and stoop-shouldered children. In order to stop this, desks



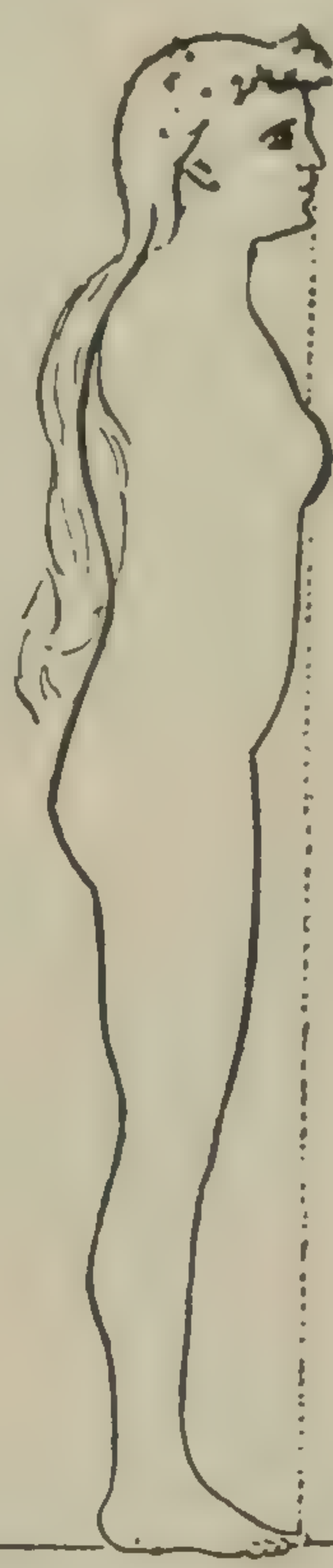
of a special pattern were made, and to-day, persons who have curvature of the spine, are not to be pitied, but blamed, unless it has been caused by Pott's disease or rickets. But occasionally persons who try to have correct positions, sometimes overdo the thing. In taking a walk down some prominent thoroughfare, it is common to see persons who affect so many ridiculous positions in attempting to look pretty. Some throw the body too far forward, as in the accompanying cut, while others throw the body too far back, but push out the abdomen. Then others will throw the whole of the upper part of the body forward and push the hips



FALSE CHEST POSITION.



INCORRECT POSITION.



CORRECT POSITION.

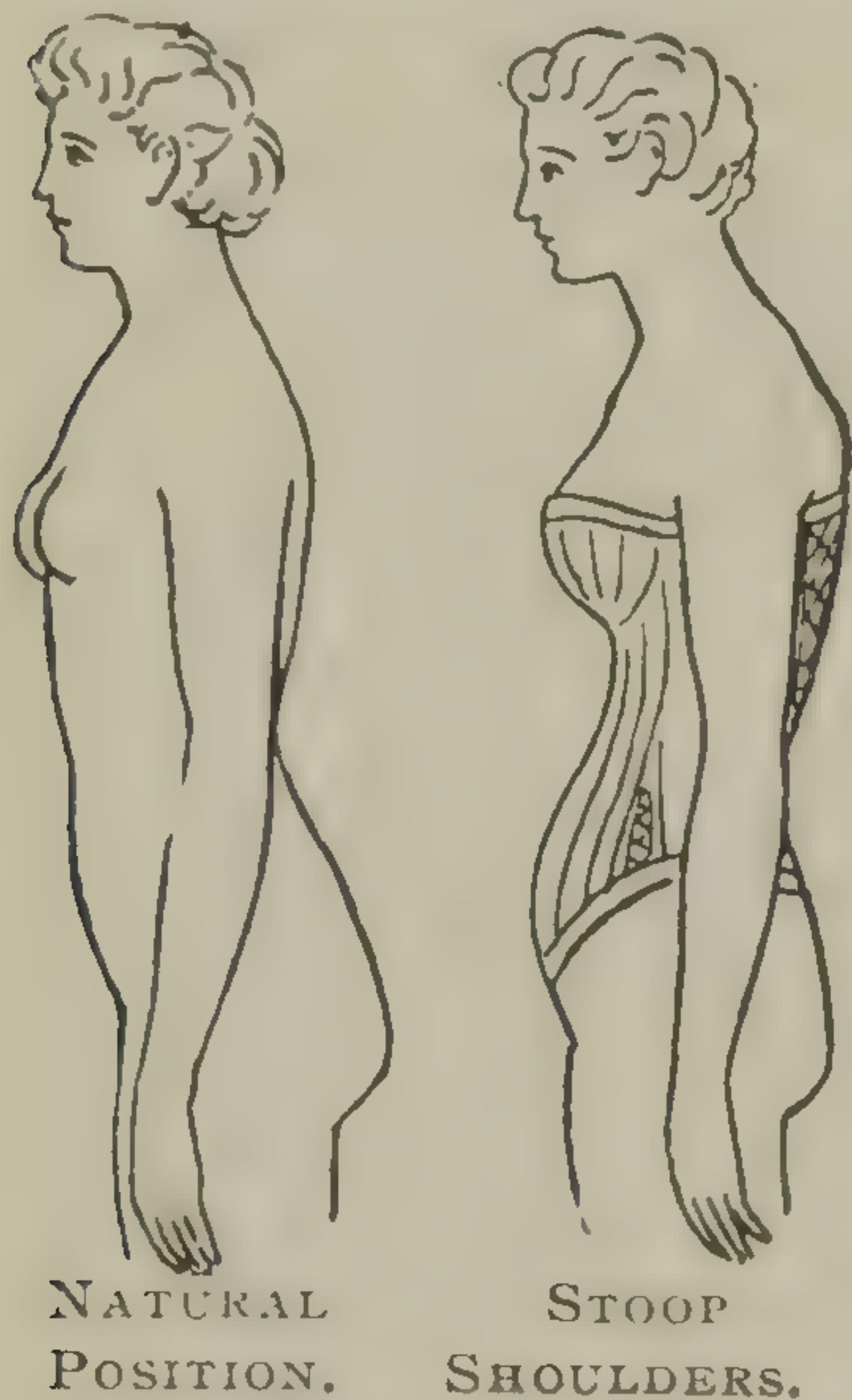
backward ; all these are incorrect positions ; a perfectly correct position in standing, is called the "military position." It is the position in which the body being erect, a line will pass through the ear, through the center of the body, down in front of the leg and through the point back of the center of the foot or ankle. It is formed by placing the heels in a line and close together. The feet should be turned equally outward and form an angle of forty or forty-five degrees.

The knees should be straight and close together. The body should face squarely to the front, and the chest be expanded, and have no constrictions whatever. Shoulders should be equal in



height and pushed slightly backward, allowing the shoulder to be flat. The head should be erect and not tipped in any direction, unless the chin is slightly drawn down; the form should be raised to its full height. The body should be poised slightly forward so that the weight of the body will bear upon the ball and heel of the foot.

Keep the eyes straight to the front. This position can be practiced before a mirror, and will enable the possessor to have a graceful and easy carriage.



NATURAL  
POSITION.

STOOP  
SHOULDERS.

There is no mal-position so common as that of stoop shoulders. One half or two-thirds of the married women have this deformity. Stoop shoulders should be corrected, as the position is not only positively harmful and a frequent cause of disease, but it is not a beautiful position, neither is it comfortable. Women who are thus afflicted can, by looking at a skeleton, see that the ribs are so arranged that in breathing, they raise and fall, allowing two or three inches expansion of the lungs. When the shoulders are thrown back, the air rushes into the cavity of the chest and fills the extra space; but when the shoulders are thrown forward, the ribs can not raise as high as they should and the lungs do not receive much air. False position of the chest is nearly as bad as the wearing of the corset, for the reason that compression of the thoracic cavity takes place in both cases, but in different forms.

## EXERCISE AND GYMNASTICS.

Exercise and gymnastics were practiced by the Greeks and Romans for the purpose of building up a race of warriors; and no woman was allowed to marry until she gave a public exhibition of her skill in running, jumping, wrestling and thrusting the lance; with the result of becoming the strongest nation of warriors and compelling the other states to adopt similar practices.

The Romans, although despising the practice, adopted it for all soldiers and officers of the army, giving prizes to the successful public contestants. Soon the practice developed a profession



of gymnasts (or gladiators) and these soon raised the standard of skill and amateurs dropped out and then the games lost their prestige.

Physiological exercise is physiological health, and health and understanding are the two great blessings of life. These are the conditions upon which all success in life depend. All failures in life are poor, weak puny, nervous, dragging and pale creatures, the successful, strong and robust, with well developed minds in strong bodies.

Dr. Morrell McKenzie, the physician of the royal family of England and the royal households of Europe and a high authority upon everything pertaining to health, says that in the child, the physiological craving for movement shows itself with the unrestrained freedom of the natural animal. If a healthy baby is allowed to have all the play for its limbs, it will go through a series of improvised acrobatic performances, twisting its limbs and turning them into knots that might excite the envy of a professional contortionist. As the child grows older, the boisterousness with which it romps may be taken as a pretty sure index of its state of health.

Wadsworth, the poet and physiologist, says that the child feels its life in every limb and only by continual confinement and restraint, (that is by swaddlings and being compelled to live under totally unnatural conditions) the wholesome exuberance of vitality is lost and gives place to listlessness and positive dislike of play. Since so much depends upon strong minds and bodies and good health, you may ask, how can these be obtained? We answer—by the fullest possible development of the bodily powers, by physical exercise, commencing with the child. Exercises should be general and not local. Very young children should be encouraged to run about, roll hoops, build castles in sand, and romp and play, instead of sitting and dawdling and hanging upon the nurse.



## THE PHYSIOLOGICAL AND THERAPEUTIC EFFECT OF EXERCISE.

Respiration, under exercise, is hurried and the pulmonary circulation is swifter. A man walking four miles an hour will breathe four times as much air as one lying down. The increased lung action removes from the blood the gaseous, carbonic dioxide and other impurities and, at the same time, appropriates an increased amount of that gas oxygen so essential to animal life.

Parks has laid down certain rules on this subject: "The air should be pure during exercise, the lungs should be perfectly free, the respirations should be watched and if laboring, the exertion should stop. Those persons who have a tendency to consumption or other chronic chest diseases should take a moderate amount of exercise that will expand the chest." Bicycle riding, on account of the lessened muscular action and the increased chest and lung action, will be found beneficial, sometimes even removing that dread tubercular trouble in its earlier symptoms.

Exercise hastens the disappearance of those morbid products; directly, by insuring an energetic pulmonary circulation and indirectly, by a general vigor attending their use. For the correction of the chest deformities, either pigeon breast whether congenital or acquired, suitable gymnastics are the only remedies.

**Circulation** is stimulated by exercise and the heart beats faster and if the work be oppressive, the pulse becomes very rapid, small and irregular. After exercise it becomes lessened and sometimes irregular. All over-exertions and sudden efforts should be avoided, as it causes hypertrophy and dilation of the heart, often rupturing a valve of a weakened heart wall. On the other hand, a life of idleness leads to fatty degeneration of the heart; therefore, in taking exercise, watch the pulse as well as the breathing, and should it become increased to more than 140 or 150 or become small or irregular, stop and rest after exercising.

**Skin.**—Exercise increases the action of the skin, causing redness and dilation of the pores and a free flow of perspiration; during repose much of the water expelled as urine, but during exercise it is evaporated through the lungs and skin during an hour of rapid, violent exercise, several pounds in bodily weight



will be lost, this is soon regained by drinking water to quench the thirst, so common during and after prolonged exercise. The evaporation of this surface moisture even notwithstanding that great amount of heat is generated at the same time, after exercise the temperature may even fall below the normal.

**Directions.**—Keep the skin clean; satisfy thirst by drinking cautiously and watch the temperature as an unusual rise in the temperature may result in sunstroke, if the weather be warm. After exercise bundle with flannels.

**On the Muscles.**—The temperature first falls then rises and continues to rise after the cessation of contraction and will be higher if there be resistance, as in lifting heavy weights. This is due to the increased blood supply and to the explosion and decomposition of a complex substance.

Under exercise against resistance, muscles increase in nitrogenous consistence, growing by hypertrophy and becoming stronger.

Trained muscles are harder than untrained ones. This being due to the increased power of full simultaneous contractions acquired by the muscular fibres and the almost complete absence of fatty matters.

**Over Use** of the muscles leads to muscular disease and is a primary cause of atrophy, paralysis and spasms, also muscular hypertrophy or condition in which the muscle is increased in size, but incapable of enduring efforts. Sudden muscular efforts, as jumping or skipping, occasionally ruptures a muscle, tendon and often bones of its attachment.

**Rules** to prevent exhaustion; Allow intervals of rest; exercise all of the muscles and not simply groups, unless special development is desired.

**Nerves.**—The nerve functions are improved in tone and the mental activity is slightly increased in neurasthenia, chorea and paresis. Appropriate gymnastics are great aids in this treatment.

**Over-Exertion** combined with exposure is a frequent cause of nervous diseases and ataxia; spinal fever and nervous diseases generally are more frequent during the winter months for this reason; it always lessens the sexual desire and is useful in irritability of these organs.



**Digestion and Nutrition** are generally improved by exercise. The appetite is increased and the digestive organs gain in vigor and then nutrition becomes more perfect. In diseases of the stomach, intestines and the liver, exercise achieves its element. Therapeutic circulation through the veins of the liver depend upon the action of the diaphragm and thoracic muscles, hence constipation, dyspepsia and biliousness finds a simple but certain means of relief in physical exercise; the benefit may be seen in cases of anæmia, scrofula and chlorosis (white blood). Gout and obesity, both caused from imperfect oxidation, can best be cured by exercise and diet.



**The Dress** should be composed of first, a union suit of gauze underwear, next the divided skirt or blouse waist and bloomers. A belt should not be worn as it prevents the free action of the abdominal muscles and hinders digestion. The same may be said of corsets. Any dress should be loose enough to avoid any restraint of action. The following is a simple method of taking free exercise, movements without apparatus. Stand erect and keep the body rigid, the hands to the side of the hips, take a long step forward, bring one leg back, then step forward with the other.

1. Turn the head slowly, alternately right and left, looking over each shoulder.
2. Bend the head backward and forward steadily, and then from side to side.
3. Rotate the head, bending it forward, to the left, back, and to the right.
4. The reverse of No. 3. (These four exercises strengthen the muscles of the throat and neck.)
5. With hands on the hips, or outstretched, and without moving the feet, twist the body as far as possible to the right and



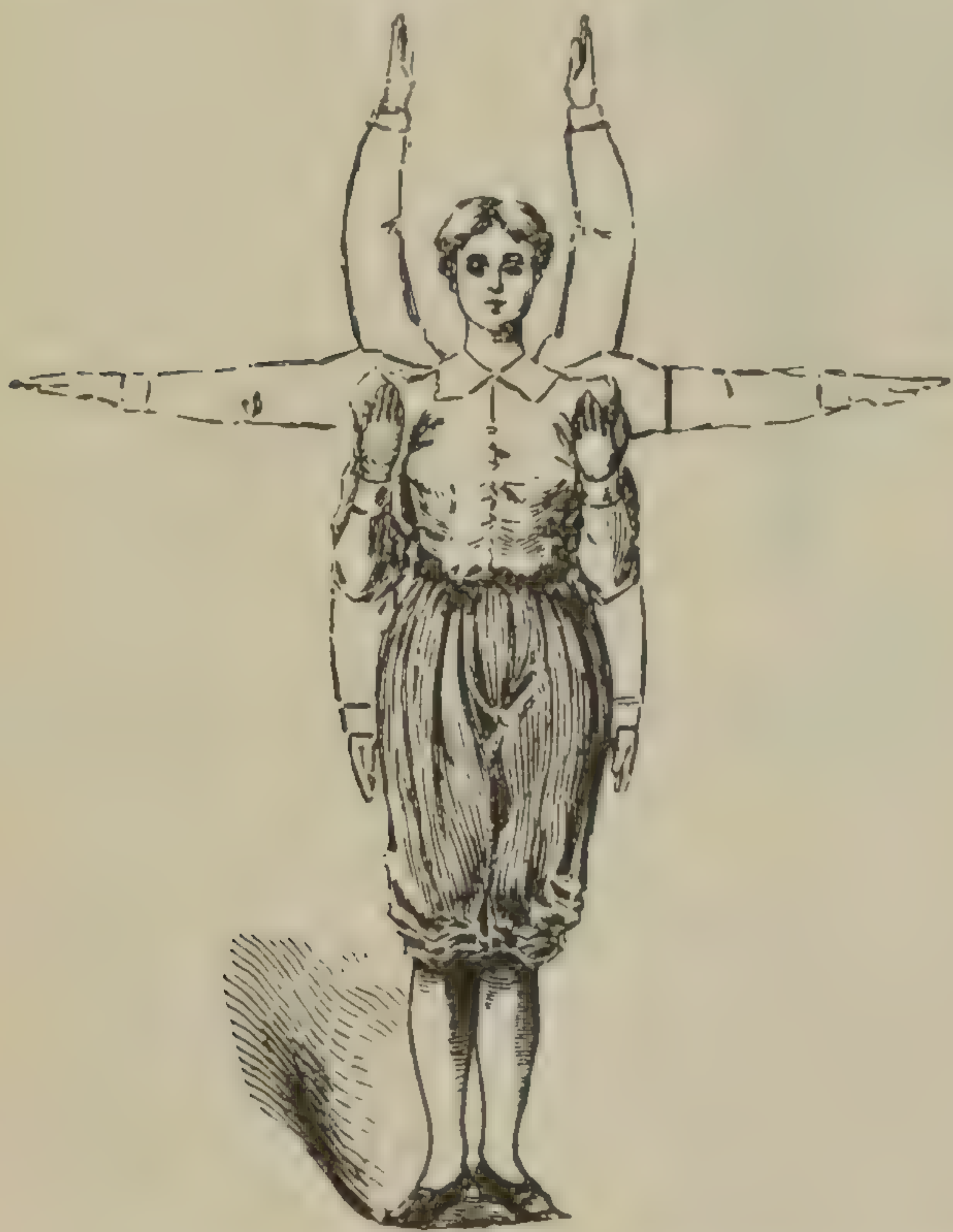
left, alternately. The head must move with the body, but not independently of it.

6. With the hands on the hips, bend the body forward and back, and from side to side, and then rotate it as the head was rotated in exercise 3.

7. Raise and lower the shoulders.

8. Bend the elbows and move them, together with the shoulders, forward and backward.

9. Raise the body up as far as possible by standing on tiptoe. Stoop down, then raise up slowly.



10. Raise the toes as high as possible, standing on the heels.

11. Raise the thigh up against the abdomen on alternate sides by bending the leg.

12. Raise the heel up to the buttock on alternate sides.

13. Stretch the arms in front, palms together, and throw them as far back as possible, on the same level, keeping the body erect.

14. Clenching the fists, as the arms are held at the sides, lift them suddenly till they are extended straight forward: Return them in like manner.

15. Raising the fists to the shoulders, extend the arms quickly straight upwards. Return in the same manner.



16. Extend the arms on each side, palms up, and bend the elbows till the tips of the fingers touch the shoulders.

17. Standing with legs a little apart, and arms hanging in front, describe circles with the fists, using each arm in turn and



keeping them perfectly straight. First describe each circle to the right, then both to the left.

18. With the hands on the hips, raise each leg in turn, so that it is at right angles with the body. Keep both legs straight.

19. In addition to the preceding, swing the leg backward as far as possible, keeping the body upright.

20. With the knee raised, throw the leg straight out in front and then bring it to the ground.

21. Sit down slowly till the thighs touch the calves.

22. Lie on the back and raise the legs to a perpendicular position. Bend body forward, then raise up, suddenly throwing the arms up straight along side of the head.

Each exercise should be repeated a stated



number of times, beginning perhaps with ten and increasing to twenty-five, and as rapidly as the gymnast is able. Such exercise may be made entertaining if it is performed by several at once, keeping perfect time in their movements with or without music.

### EXERCISE FOR THE PURPOSE OF STRENGTHENING THE MUSCLES DURING GESTATION.

As the foetus is expelled by the muscles of the uterus, vagina and abdominal cavity, the abdominal muscles should be well exercised during gestation, in order to insure their proper and complete development, and to shorten the time and also to aid in relieving the pains of childbirth. This can be done by adopting some method of exercise, especially adapted to strengthening these muscles. Such movements should be continued weeks and months in order to fully insure complete and perfect development. No one can get good results or see the benefits from one day's exercise. It is the constant and continued movement that develops muscles. One day's exercises are practically of no use. The following rules for exercising are especially beneficial at this time:

Stand erect, swing the body forward as far as possible, without lifting the heels or toes or bending the knees, count six to each movement. Keep feet firm and knees straight. Sway the body from side to side, slowly. Place hands on hips, then bend the body forward as far as possible. Rise slowly, bend backward as far as possible, rise slowly, keeping the back and knees stiff.

Inflate the lungs and place the tips of the fingers upon the shoulders and keep them there. Bring the elbows forward, touch them, raise and bring backward as far as possible and lift elbows up as high as you can, lower to first position and expel the air as slowly as possible.

Stand erect, extend hands and raise them upward and forward as far as possible hold breath and count twenty, then bring arms forcibly against the chest and strike, at the same time, forcing the air out as if saying "ha."

Stand erect, or kneel upon something soft, clinch the fist, raise arms to side and back of head, inclining the body back-



wards, spread the knees as far apart as possible and remain counting twenty.

Place the knees upon the floor, hold the breath, bend the body backwards and to one side, reverse to opposite side, expel the air forcibly.

Same position, twist the body from left to right, and from right to left, keeping the hands folded upon the top of the head.

Lie upon the back, flex the knees, spread them as far apart as possible, take each knee separately, bend inward as far as possible, then outward, until they touch the floor, then take both limbs. flex the knees and keep them together and sway from side to side, then flex the knees and spread them until they touch the



floor, raise them upward keeping them upon the floor, and try to touch the arm pits. Now thrust the limbs downward until they are straight. Repeat the last movement.

Lie upon the face, extend the arms and raise the body slowly by the toes and fingers.

Same position, rest the body upon the elbows and toes, sway the body and shoulders from side to side.

A woman can get good exercise by climbing stairs, provided she wears a loose dress, keeps her mouth closed and the body erect and then takes two steps at a time, as fast as possible.



TO INCREASE PERISTALCIS AND INSURE DAILY  
EVACUATION OF THE BOWELS

lie upon the back and relax the abdominal muscles, then move the hands rapidly over the surface of the abdomen and thoroughly knead the bowels by pressing the fingers down deep in the abdominal cavity. A little olive oil will aid considerably in executing this maneuver.

No. 2. Reclining upon a hard mattress or bed, upon the back, inflate the lungs, then flex the knees, and move the hips up and down two or three times, lifting by the feet, and the back part of the head. This can be done by all invalids under the cover.

No. 3. Lie upon the back upon a mattress, flex the knees upon the thighs, and then the thighs upon the abdomen. Place the hands under the hips and lift the hip up without the hands, two times. Then lift the hips by means of the arms and head and hold to count ten, taking a strong inhalation of air and hold the breath until twenty is counted.

No. 4. Standing, place the toes and knees together, facing each other, cross the hands over the back, the body to keep a perpendicular position; allow the body to slowly descend until the sitting posture is reached, then slowly rise to a standing position keeping the toes in the same position and the trunk erect.

No. 5. Standing erect as before, the head and body thrown back with the hands at the side, thumbs backward; take a long inspiration through the nostrils, keep the mouth cleared; hold the breath as long as possible, then exhale the air. Those persons with narrow chests and weak lungs can increase the lungs and breathing power by bringing the closed hand forcibly against the chest walls while full of air.

No. 6. Stand erect. Arms to side, inflate the lungs as full of air as possible and retain and count twenty-five; then expel through the mouth with a forcible expiration.

No. 7. Rest hips upon the floor, the limbs straightened and out side by side, then fold arms across the small of back and lean the body as far from side as possible; then keep the body still and bend forward until the face touches the limbs; then backward to the floor, slowly rising without touching the hands or arms. Repeat five or six times, each position.

No. 8. Lie upon mattress and lift the feet and head upward, keeping the knees and body stiff, allowing only bending at the



hips. Hold in this position two or three minutes; rest and repeat five times.

No. 9. Stand. Flex the knees upon the thigh; hold foot with hand balancing with the other; then keeping the body erect, slowly descend until the knee touches the floor; then rise slowly until the standing position is reached; then repeat, using the other foot.

No. 10. Knees upon the floor, widely separated, move the body neck and head as far as possible, then back and to the opposite side quickly. All of the above movements can be practiced with advantage by all women. These simple maneuvers practiced daily will relieve constipation and at the same time give a larger breathing capacity to the lungs as well as insure better health by increasing the circulation.

### WHEEL RIDING.

The wheel-riding habit has been much commented upon and often wrongfully condemned. There is such a thing as overdoing any kind of exercise, and when wheel-riding first came in to practice, it was considered smart to be able to ride. At that time, girls and women rode much to show themselves, but now it is different. It is a feat which almost anybody will be able to accomplish in one or two evening's practice and the novelty is worn off. Then again, the prejudice of showing off the legs has been greatly modified, and women who have adopted the divided skirt or the bicycle suit are to be seen daily until they no longer attract attention. Then again, it was argued that the continual pressure of the horn of the saddle against the perineum and the constant jolting caused uterine congestion and displacement, and indirectly, backache, headache, limb ache and all other kinds of aches and pains, but all this can be induced at the wash tub, or any place or way, after long continued hard work.

However, bicycle riding as a sport or as an exercise, should be classed in the first rank. The essential thing in exercise is entertaining the mind, while the muscles are being strengthened. This is accomplished in riding the wheel.

There is a constant change of objects, while the muscles of the back are also receiving their share of strength, but the most useful is the exercise of the muscles of the chest, causing the lungs to expand and increasing the breathing power. Therefore, rid-



ing bicycles should be recommended to all weak and narrow chested women, also those who have a tendency to scrofula and consumption. Even those in whom symptoms have already been manifested, with proper exercise in this way and with medicine, this dreaded disease may be baffled, but care should be taken not to convert simple exercise into overwork. Bicycle riding when carried beyond the point of fatigue, can only do harm, and can even cause the development of those very uterine troubles which judicious exercise would overcome.

In riding a wheel, much care should be taken to select the smoothest roads, as the long continued jolting of those delicate organs will cause congestion, inflammation and possibly ulceration and the whole train of aches and pains which usually accompany disorders of this nature.



## DEVELOPMENT OF THE MUSCLES OF THE LEG.

In this day of bicycles and bloomers, there is one set of muscles which should be well developed in women. We have already said that a large pelvis, thighs, and plump limbs with small feet are great female beautifiers. Thus to develop the leg muscles, since they are to be seen daily instead of hidden by heavy skirts, becomes an important part of the new woman's toilet. Physiological health is obtained by physiological exercise. Thus, exercise becomes first among the developing remedies, but the special kind of exercise that will best develop the leg muscles, is the motion that will increase the size of the muscle that compose the calves of the leg. Those muscles are the soleus and gastrocnemius and the plantaris muscles behind and the flexus digitalis, perineus longus, tibialis anticus and others at the front and sides. The use of these muscles is to raise the heel and toe, as in walking, standing on tiptoe, etc. Thus, to develop them, it is necessary to take such exercise as will specially increase the size of them. This can be done by walking, climbing stairs, running sewing machines, bicycles, or other pedal apparatus. Small shrivelled and sunken limbs can in a little time, with perseverance, become enlarged and perfectly healthy by the use of the vacuum apparatus. The vacuum case should be large enough to allow the limb to be placed into it. At the top a sheet of elastic large enough to cover the top and then fastened by means of a clamp or hoop, of the same metal as the case, an opening in the centre will allow the limb to pass through and at the same time fit tight enough to prevent the air from passing in. The air pump then exhausts the air and the limb is allowed to remain in the vacuum thirty minutes daily. After removing from the case the muscles should be gently pinched and lifted up or spanked, with the muscle beater or some heavy strap. The naked hand gives as good results as anything and will cause redness of the surface. Muscular exercise can be taken immediately before using the vacuum and the body allowed to take complete rest after using the vacuum.

## TO DEVELOP THE BREASTS.

As love and the whole body are in sympathy, and as the breasts, womb and pelvis are enlarged in all perfect sexual and



love states, and the finer, purer and deeper this love, the more rounded, elevated and beautiful the breasts will be. Then those who wish to have good forms, perfect breasts and queenly carriage, should first create a healthy love condition, and keep the body as healthy as possible by using only such food, as is especially required for its daily building up. The proper amount of outdoor exercise should be taken and of such kind as will most develop the chest and lungs. Special movements for the development of the breasts is the same as that given for consumptive persons, gentle pinching, patting and squeezing of the breasts and nipples. Bathing them with stimulating liniments; one composed of turpentine, red pepper and poke root are the very best. The following formula will be found very useful to increase the size and form of the female breast:—

Fluid extract of capsicum.

Oil sassafras.

Oil turpentine.

Oil linseed.

Rub this well into the breasts twice or three times a daily or oftener. Rub in before a fire with heat. The odor of the sassafras or turpentine can be changed by adding some perfume to suit the individual taste

Medicines to be taken inwardly are such as will stimulate secretion generally. Tincture of poke root in doses of four or five drops. This is very good, as is also the fluid extract of jaborandi in doses of ten or fifteen drops, three times daily.

Mechanical appliances are the very best developers; they consist of an air pump for removing the air and a metallic case that fits snugly over the breast. By removing the air, blood will flow to this part and enlargement will be the result. Thus lean and very small and flat breasts will be made to increase to a splendid size in one month's time, by this treatment, combined with the rubbing of liniment and such other exercise as is best for the health.

### HARE LIP.

This deformity is such an unsightly one, and often causes the person who is afflicted to have many moments of shame. The means for removing and curing this terrible deformity are so simple, and almost absolutely painless, that any one, and more especially a woman, should not be long in having a cure effected.



The operation consists in paring the edges or taking a "V"-shaped piece from each side, and then bringing the edges together, thus forming a single lip and in a few weeks the wound heals and there will scarcely be left a seam to show where the horrible deformity existed.

### TORN EARS.

Torn ears are very unsightly, and cause the owner considerable uneasiness and much embarrassment. They can be cured by paring the edges and bringing the parts together with stitches and in four days the wound will be healed, and there will be scarcely a trace left of what was once a great disfigurement.

### WRINKLES.

One of the most tell-tale marks about the female face is what is termed wrinkles. They are never a thing of beauty but are always a means of telling the beholder your age and your troubles. They are, also, always reminding their possessors that they are no longer giddy girls or great beauties.

Wrinkles on the forehead can easily be removed by making a horizontal incision through the skin of the forehead at its junction with the scalp. Here a second elliptical incision is made below the first and the enclosed skin is then dissected out and the edges brought together with a number of fine sutures composed of silk. This will remove the superfluous skin and all relaxed tissue, the cause of the wrinkles. The operation when skillfully done, leaves no scar to the ordinary observer and is certain to remove the troublesome blemish.

### VERTICAL LINES.

Vertical lines between the eyes are caused by frowning or from wearing poorly adjusted eye-glasses. This can be remedied by making vertical incisions including a very small area of tissue and removing the "V"-shaped piece, and by stitching the edges closely together. This will remove all and scarcely leave a trace of the operation.

THE LINES RUNNING FROM THE NOSE DOWNWARD as in other forms of wrinkles, can be easily removed. The incision in this case is made below the jaw-bone, and sufficient tissue is removed to smooth out the wrinkle. The operation is almost painless and very seldom leaves a scar.



One of the most common and disfiguring things met with is the flabby and wrinkled condition of the muscles of the skin and neck and on account of its unsightliness, causes a great deal of discomfort to those afflicted in this way. The simple incision of the skin near the clavical bone and the removal of sufficient tissue will in a few weeks rid the patient of wrinkles.

#### DIMPLES.

One of the most distinct marks of beauty in woman is a dimple on the cheek or chin. Those who wish to undergo the necessary pain attending an operation can have dimples produced equal to any which nature has bestowed upon her chosen ones. The operation is a comparatively simple one, consisting of introducing a small knife or needle-like scalpel under the skin, and there dividing a few of the muscular fibres and then pressing down the skin into the cavity thus formed, and retaining the compress for a few days until adhesion takes place, and you have a dimple which nature cannot remove. This operation does not leave a scar.

#### PROTRUDING LIPS.

The above deformity can be corrected by a very small operation, as in the removal of wrinkles, outstanding ears, sunken and crooked noses. These are all easily removed by the means of plastic surgery and no young girl should neglect to have such matters as these attended to. A girl is very much dependent upon her good looks for her future. If she is handsome, she can be the chooser of her life companion, but should she be ugly, she will most likely have to let others do the choosing while she becomes that most dreadful thing—an old maid.

#### ENLARGED FINGER JOINTS.

An aspect of clumsiness is often given to the hands by enlarged finger joints. These enlargements are caused by rheumatism, rheumatoid arthritis, or rheumatic gout; inflammation of the synovial membrane, as in tuberculosis, or syphilis. Most of these enlargements may be removed by proper treatment. Those joints which have the chalky deposit are the ones that cause the most horrible deformity of the hands and can be removed by the use of massage and hot applications, rubbing the joints with some oily substance, and the internal administration of some solvent, such as lithiated hydrangia, iodine compound tincture, etc.

The tuberculous, syphilitic, rheumatic and gouty troubles should be healed and the joints will soon be free and natural.



## BATHING.

**Cold Bath.**—The effect of a bath depends very much upon the temperature. In a cold bath, the temperature of the water is at or below 70° F.

The first effect of immersion in a cold bath is contraction of the vessels of the skin, accompanied by a feeling of chilliness and perhaps even of shivering. When the water reaches the level of the chest, the respiratory center becomes reflexedly affected and the respiration becomes gasping.

After a few minutes the cutaneous vessels begin to relax, and the blood returning to the surface warms it. If the person now comes out of the bath, dries quickly and rubs vigorously, the brisk circulation in the skin gives rise to a pleasant feeling of warmth. The feeling of warmth, or at least of lessened coldness, will occur even if the bath be continued, but the increased circulation in the skin allows the blood to be much more quickly cooled and thus the temperature of the body is much more quickly reduced. When the blood which has been thus cooled in the skin returns to the nerve centers, it appears to stimulate the vasomotor center and produces a second contraction of the cutaneous vessels, accompanied by a greater and more persistent chilliness than before.

The object of cold baths is usually, first, to have a tonic and bracing influence on the body; or second, to abstract heat from the body in cases of fever.

As a tonic, the cold bath is often very efficacious and not only gives a feeling of strength and comfort, but tends to prevent those who take it from catching cold so readily as they might do.

The vessels of the skin are, as has already been mentioned, the regulators of temperature and contract when they are exposed to cold, thus protecting the internal organs from its chilling influence. But Rosenthal says that when animals are kept for a long time in a warm chamber, their vessels lose to a great extent their contractile power and thus the animal becomes more readily chilled when exposed to cold. Cold baths, by training, as it were, the cutaneous vessels to contract, tend to protect the organism from the injurious effects of accidental exposure. Besides this, however, the stimulation to the circulation which comes as



an after-effect, tends to increase both the tissue-change in the body, and the excretion of waste substances from it. In consequence of this, cold bathing is usually followed by an increased appetite so that the most favorable conditions for the nutrition of the body are supplied by cold baths, viz., increased supply of food, increased tissue-change, increased excretion of waste.

Cold baths may therefore be looked upon as a most powerful tonic. But while cold baths are of great use to those with whom they agree, they may be productive of great harm when they are indiscretely used. As a general rule, it may be said, that when they cause great discomfort during the bath, and especially if they cause chilliness afterwards, not removed by brisk friction, they do harm rather than good. This is more especially the case with children and with persons with feeble circulation.

Rosenthal's experiments, already quoted, show us that there is a scientific basis for the popular notion of "hardening" by exposure.

But this process may be carried much too far, and instead of getting excitement of the circulation with all its attendant advantages, the effect of the bath may be to lower the temperature, depress the circulation and greatly injure the nutrition.

The risk of such injury may be much diminished by attention to the mode of giving the bath. In children or delicate persons it is better, as a rule, to avoid immersing the whole body, and especially to avoid putting the feet in cold water at the same time as the body. The best way is to let the person sit down in a sitz-bath with the feet out, and quickly dash the water over the face, chest, back, and limbs. Then a large bath sheet is to be thrown around the body so as to completely envelope it, and to prevent its being chilled during the process of drying, for during the exposure of the body while the surface is still wet, the chilling process is going on by evaporation during summer and by conduction of the cold air in winter. This may be seen markedly in persons of feeble circulation who rise from the bath with a feeling of slight glow, but lose it completely and begin to feel chilly, if the process of drying is delayed. Instead of a bath sheet, a dressing gown made of towelling may be used. For very delicate persons the water of the bath should be rendered tepid by the addition of a little hot water, and the face may not be sponged until the rest of the body has been dried and the clothes put on. In winter the temperature must not be too low; it is best, there-



fore, for delicate persons to take a slightly tepid bath before a fire. Tolerance to cold is moreover often established by gradually reducing the temperature of the water in successive baths, care being taken that no feeling of chilliness supervenes.

Sometimes the vigorous use of the flesh-brush over the chest tends to assist reaction, and, if practicable, a short though brisk walk is advisable just after the bath. It must not, however, be long, as otherwise exhaustion might set in, and the appetite instead of being increased would be diminished.

Besides the tonic action which cold baths exert on the circulation and on the body generally, they appear to have a beneficial action in certain disturbances of the respiration.

The respiratory center may be strongly affected reflexly by cold applied to the surface of the chest, as is shown by the gasping, breathing, or inspiratory tetanus, observed when the cold water reaches the chest on walking into it. In children suffering from broncho-pneumonia the severe attacks of dyspnoea which sometimes occur are relieved by a momentary immersion in water at sixty degrees F.

Cold sponging, as recommended by Ringer in his excellent work on Therapeutics, is exceedingly useful in laryngismus stridulus.

It should be used two or three times a day whatever be the weather. If the child be hoarse, it should not be allowed to go out, but if there is no hoarseness, the fresh air, even if cold, will be advantageous. To arrest a paroxysm, cold water should be dashed over the child.

Ringer also recommends it for a catch in the breath occurring in young children during the night, awaking them from sleep.

By abstracting heat, cold baths are useful in fever in several ways. By reducing the temperature they tend to lessen the amount of tissue-change which is already excessive and they thus tend to husband the patient's strength, as well as to reduce the alterations of the tissues, such as fatty degeneration of the heart which occur in consequence of a high temperature. By lessening the temperature, they diminish the rapidity of the pulse, and by thus prolonging the cardiac diastole give more opportunity for the nutrition of the muscular wall of the heart.

A high temperature, if it is remittent, is better supported than a lower temperature, if it is remittent, and therefore, Liebermeister to whom we in great measure owe the recent intro-



duction of cold baths as a therapeutic measure, uses them with the object of increasing and prolonging the remissions in temperature which usually occur spontaneously in febrile diseases—producing a condition of relative apyrexia.

There are several ways of employing cold baths to reduce temperature. One is that of cold effusion, in which the patient is put into a tub and four or five gallons of cold water thrown over him. Another is to place the patient in a bath at about 90° F. and gradually reduce the temperature by the addition of cold water 80°, 70° or even 60° F.

The patient is kept in this from ten to twenty minutes, according to his strength and the height of the temperature. As the temperature continues to fall for sometime after the removal of the patient from the water, the bath should not be continued so long as to lower it to the full extent required while he is in the bath, lest collapse occur afterwards.

Instead of the bath being gradually cooled down, it may be used at once at a temperature between 60° and 90° according to the condition of the patient, and if the temperature be very high, the water must be cooled still more by means of ice and its action aided by ice given by the mouth and rubbed or laid upon the surface of the body. This treatment may be adopted even though pneumonia be present, if the patient's life is threatened by an excessive rise in temperature. When the temperature rises again the bath should be repeated.

**Cold Pack.**—The pack is a less efficient means of abstracting the heat of the body, but it is useful in causing a different distribution of the blood of the body. It is therefore sometimes very useful in lessening delirium and producing quietness and sleep.

In employing it, a wet sheet is well wrung out of cold water and wrapped tightly around the patient; over this are wrapped one to three blankets. A little heat is abstracted at first by the cold of the sheet, but this is very little, and indeed it is asserted by some that cold packs, instead of abstracting heat, prevent its escape. The skin becomes warm and frequently profuse perspiration is produced. A certain amount of heat is lost, though perhaps not very much, by the evaporation through the blankets. It is probable, however, that the production of heat is to a certain extent lessened, at least in restless patients, by their movements being mechanically restrained by the sheet, and also by the blood



being withdrawn from the internal organs and muscles to the skin. As the pack restrains the movements in a most complete way and with a force against which it is in vain to struggle, while at the same time it is comfortable and soothing, it frequently induces sleep when narcotics have been useless.

**Cold Sponging** is sometimes a very useful means of abstracting heat in cases of fever, where the patient is weak and the temperature, though perhaps not going above 104 or 105 degrees F., tends rapidly to regain the former height after cooling and where it seems advisable to subject the patient to frequent movement in and out of bed, required in cold baths. The loss of heat consequent on cold sponging is due partly to the application of the cold water, but it is due chiefly to the evaporation which takes place from the surface of the body. Consequently sponging with tepid or even with hot water will also reduce temperature.

**Cold Douches.** In this form of bath a stream of water having considerable force is directed against a part of the body. The stream may be unbroken, and to this the name *douche* is usually restricted, or it may be broken up by delivery through a hose into a number of minute streams, so as to form a shower or rain bath. If the *douche* is large, (one or two inches in diameter) it causes a great amount of shock and sometimes does much harm. Usually, a stream a quarter of an inch in diameter is quite sufficient for all purposes. Douches are chiefly applied to the spine, spleen, liver, joints, anus and vagina.

**The Spinal Douche** usually consists of a single stream, and may either be allowed to fall vertically upon the spine, the body being more or less inclined, or it may be delivered from a horizontal pipe with the body in an upright position. It is useful as a stimulant in melancholia, cerebral anaemia, and general debility. To avoid too great depression it is better to apply hot and cold water alternately, unless used immediately after a hot application, such as a spinal pack. Douches to the head are useful in alcoholic coma. Douches to the liver and spleen have been found useful in chronic congestion and enlargement of these organs. The *douche* applied to stiffened joints appears sometimes to be of considerable service.

**The Ascending Douche** is usually delivered through a hose,



so as to form a shower, and it is directed against the perineum while the patient is in a sitting position. It is useful in hemorrhoids and pruritis ani, and when used at a regular hour, daily, first tepid and then cold, it is useful in constipation.

The vaginal douche is used by the patient lying on her back with the knees drawn up and with the pipe in the vagina. It is useful in vaginal leucorrhœa and cervical catarrh, and in chronic subinvolution and hyperplasia. The hot douche at 105° to 110° Fahrenheit twice a day for several minutes is of much value.

### LOCAL APPLICATION OF COLD BATHS.

**Sitz Bath.**—When a person sits down in a cold sitz bath, or when he sits down in an empty tub, and cold water is poured into it until it covers the hips, the muscles of the parts exposed to the cold contract, and the blood is consequently driven to other parts of the body. It would appear, however, that not only do the muscles of the skin contract, but also that contraction of the intestinal muscles occur reflexly, through the spinal nerves, so that in consequence there is a feeling of warmth and fullness in the head, an increase in the volume of the arm as measured by the plethysmograph and a rise in the temperature of the axilla.

A cold sitz-bath, when applied only from one to five minutes and followed by a brisk rubbing, tends to increase the amount of blood in the abdominal organs, to quicken the circulation in the liver and spleen and to augment the activity of the movements in the intestine and bladder. It may, therefore, be used with advantage in constipation and in disorders of the bladder, depending upon weakness, such as difficulty in expelling the urine or difficulty in retaining it.

In pregnancy, cold sitz-baths are sometimes useful, giving a feeling of comfort and strength, and lessening the sensations of dragging in the abdomen.

When any tendency to premature expulsion of the foetus exists, they should be avoided, as the increased circulation which they cause in the pelvic organs might lead to abortion.

When cold sitz-baths are continued for a long time, as from ten to thirty minutes, at a temperature from eight to fifteen degrees C., the contraction of the abdominal vessels appears to be more permanent, and thus they may be employed for the purpose of lessening congestion in the intestine, and may be used with



advantage in cases of obstinate diarrhoea and congestive enlargement of the liver and spleen.

The effect of a prolonged sitz-bath in lessening congestion of the abdominal organs, is greatly increased if it be preceded by a wash-down, with brisk friction so that the blood may be attracted to the other parts of the surface as well as driven out of the abdomen by contraction of the intestinal vessels.

**Cold Foot Bath.**—Coldness of the feet not only causes discomfort to the person, but if it occurs at night, it may prevent sleep.

Putting them in hot water may warm them temporarily but will not be so permanent, and a much better way is to put them in cold water, rub them briskly while in it, and then dry them thoroughly with a soft towel, giving them a rub afterwards with a rough bath-towel.

Cold foot-baths are to be avoided during menstrual periods as they have a very great power indeed to check menstruation and frequently bring on amenorrhœa. Their power to check the menstrual flow is popularly known, and sometimes great harm is occasioned by young women using them to check menstruation, in order that they may be able to attend some place of pleasure.

**Cold Compresses.**—By the application of cold over the course of an artery, it can be made to contract, and the amount of blood to the district which it supplies may conveniently be diminished.

When cold application is allowed to remain for a while, it gradually acquires the temperature of the body, and if evaporation be prevented, it comes to have the same effect as warmth, but if constantly renewed, the contractions of the arteries may be kept up. A similar contraction to that just noticed in the vessels of the arm may be produced in the vessels of the head by cold applications around the neck. This is shown by the fall of the temperature in the auditory meatus. Cold may be applied to the neck either by a bag containing ice, or by an India rubber bag, or coils of tubing, through which cold water may be kept constantly flowing.

As a very large proportion of all the blood in the body flows through the carotids, the application of cold to the neck may act as a general antipyretic. The accurate application of ice-bags to the neck so as to cover up the subclavians, has been recommended



in fever to reduce the temperature generally. In tonsillitis, cold to the neck is useful for its local action.

Cold to the head is frequently applied in delirium, meningitis and severe cephalgia. It may be applied either by a bag containing cold or ice water, or still more conveniently by a cap consisting of india-rubber tubing through which water constantly flows. A continuous stream of water through an ordinary water-bag reduces the temperature slightly and thus relieves the symptoms in prolonged fever.

### WARM BATHS.

**Tepid Baths.**—These baths range from  $85^{\circ}$  F. to  $65^{\circ}$  F. or  $29.4^{\circ}$  C. to  $18.4^{\circ}$  C. They are chiefly used for cleansing purposes, and at the lower margin of  $65^{\circ}$  F. they may be used for a somewhat tonic action in persons of feeble circulation.

**Warm Baths.**—These range from  $97^{\circ}$  F. to  $85^{\circ}$ , or  $31.1^{\circ}$  C. to  $29.4^{\circ}$  C. When the water is above these temperatures it forms a hot bath. The warm water softens the epidermis, and is thus of much use in chronic skin diseases. It dilates the vessels of the surface of the body, and thus tends to lessen any internal congestion. At the same time it tends to induce perspiration. On this account the warm bath is useful in lessening pain, depending upon congestion of internal organs and in preventing congestion from going on to inflammation. It is, therefore, very serviceable when there is threatening of bronchitis, or gastro-intestinal catarrh, colic, etc. It tends to reduce the temperature both by dilating the peripherical vessels and inducing perspiration, and is therefore useful in febrile conditions. By withdrawing blood from the brain it tends to induce sleep.

**Hot Baths.**—These baths range from  $97^{\circ}$  F., or  $36.1^{\circ}$  C. upwards. A much higher temperature can be endured at first if the temperature be gradually raised by the gradual addition of hot water to the bath while the body is immersed, and the bath may thus be raised as high as  $110^{\circ}$  F. Hot baths not only prevent loss of heat from the surface, but if above the temperature of the blood, actually impart heat to the body. The consequence of this is that the temperature of the body rises very rapidly, and therefore the respiration and pulse both become very quick. The peripherical vessels become still more dilated than in the warm bath, and the blood pours so rapidly through them that, in



spite of the quick and powerful action of the heart, there may be a tendency to syncope when the head is raised. After remaining in such a bath from ten to twenty minutes, the patient must be carefully lifted out so as to avoid any risk of syncope and should be wrapped in warm, dry blankets. The hot bath is a still more powerful agent than the warm bath in producing sweating, and is employed in cases of dropsy.

**Hot Foot Bath.**—A hot foot bath has a general effect that can hardly be explained by the simple dilation of the vessels of the feet and consequent derivation of blood to them. It seems indeed to exert some reflex action on other parts of the body and causes a general feeling of warmth. It is very useful as an adjunct to vascular stimulants in relieving congestion and preventing inflammation, as in threatened catarrh, bronchitis, etc. When the feet are put into a hot bath, we find that the femoral arteries become much dilated and pulsate much more vigorously than they did before. It is probable that this dilation extends beyond the femoral to the iliac arteries and that the supply of blood is increased in the pelvic organs as well as in the feet. In cases of amenorrhœa, especially where it has been brought on by exposure to cold, hot foot-baths tend to restore the menstrual flow. They should be begun four or five nights before the menstrual period is expected and continued during the time it ought to last. Their efficacy may be increased by the addition of a little mustard.

**Hot Sitz Baths.**—These have a still greater tendency than hot foot-baths to increase the circulation in the pelvic organs and they may be used either alone or with mustard in the manner just described in cases of amenorrhœa.

**Poultices.**—Poultices are simply a means of applying heat and moisture to a limited portion of the surface of the body. Their mode of action has already been discussed. They consist essentially of some farinaceous substance made into a paste with hot water and the most common substances used as bases are linseed meal, bread, bran, oatmeal or starch. In all cases, not only should the water with which the poultice is made be perfectly boiling, but the bowl in which it is mixed, the spoon with which it is stirred, should all be as hot as possible. By adding the linseed meal to the water and constantly stirring there is less chance of the poultice being knotty than if the water were added to the meal. If the poultice is intended to be applied to a wound, sore,



or carbuncle, it should be spread upon a piece of flannel or tow and applied directly to the skin, because the softening action of the water and oil it contains on the dermal tissue is required as well as the warmth. But where the poultice is used to relieve pain, congestion, or inflammation of the internal organs, as in pluerisy, pneumonia, or colic-intestinal, biliary, or renal, it ought not to be applied directly to the skin, but should be separated from it by something which conducts heat badly, such as flannel. The reason for this is that it is impossible to apply a very hot poultice directly to the skin on account of the pain it causes, whereas if a substance which conducts heat badly be interposed, the poultice can be applied boiling hot, the heat gradually passes through without becoming inconveniently great, and is retained a much longer time. In order to accomplish this, a flannel bag should be prepared, a convenient size being twelve inches by eight; this should be closed at three edges and open at the fourth one; one side of it should be about one inch or one inch and a half longer than the other, and it is convenient also to have four tapes attached at the points which form the corners when the bag is closed, in order to keep the poultice in position. Besides this, another flannel strip should be prepared of the same breadth as the length of the bag, and long enough to wrap around it once or twice. Crushed linseed, bowl and spoon should then be got together, and the spoon and bowl thoroughly heated by means of boiling water; the poultice should then be made with perfectly boiling water, and rather soft. As soon as it is ready it should be poured into the bag, previously warmed by holding it before the fire; the flap which is formed by the longest sides of the bag should now be turned down and fastened in its place by a few long stitches with a needle and thread; it should then be quickly wrapped in the strip of flannel (also previously warmed), and fastened by means of tapes. It may be covered outside with a sheet of cotton wool.

### MEDICATED BATHS.

The addition of stimulating substances, such as salt, to the water increases the stimulation to the skin, and the amount of after-reaction.

In sea bathing, the stimulating effect of the salt is further increased by the mechanical shock of the waves, and sometimes also by the friction of the fine sand of the beach. Sea bathing



also differs from other baths by the fact that muscular exertion is combined with them in simply moving about and retaining one's footing, or still more in swimming.

**Carbonic Acid Bath.**—This is a saline bath, containing two to three per cent. of chloride of calcium, with varying proportions of free carbonic acid up to three grammes in the litre. It has been recommended and is said to act as a cardiac tonic.

**Acid Bath.**—This bath is made by mixing eight ounces of nitro-hydrochloric acid with a gallon of water at blood heat (98° F.). This is sometimes used as a foot bath, but is better applied as a compress. A flannel roller about a foot wide, and long enough to go twice around the body, should be soaked in the acidulated water, wrung thoroughly out, and rolled round the region of the liver; a piece of oil-silk, large enough to cover it completely and leave a little margin over, should then be put over it. It may be worn for several days, being renewed every night. It is chiefly useful in chronic diseases of the liver.

**Alkaline Bath.**—This is made by adding crystallized carbonate of sodium to water in the proportion of about one drachm to each gallon. It is chiefly used in chronic skin diseases.

**Sulphurated Bath.**—This may be made by dissolving sulphurated potash in water, about one-half a drachm to the gallon, or, in imitation of Barege waters, and sodium chloride in the proportions of twenty grains of each to the gallon. These are chiefly used in chronic, scaly, skin diseases and in rheumatism. Much more benefit is usually obtained by a visit to the sulphur springs, such as those of Aix-les-Bains, Aix-la-Chapelle, Barege, Harrogate, Strathpeffer, French Lick, Martinsville, or Montezuma, Ind., than from the use of sulphur baths at home.

**Mustard Bath.**—This is made by adding mustard to water in the proportion of about half a drachm to a drachm in a quarter of a gallon. It is a powerful stimulant, but must not be applied too long. It must be remembered that while a slight stimuli to the skin increases the frequency and energy of the cardiac contractions and the rapidity of the circulation, and raises the temperature, severe irritation of the skin lessens the frequency of the pulse and the rapidity of the circulation, dilates the vessels and lowers the temperature. The patient should never be allowed to remain more than ten minutes in the bath, and should at once be



removed as soon as he feels either a burning of the skin or an icy coldness. Mustard baths are generally used in order to quicken the appearance of the eruption in the exanthemata.

**Pine Bath.**—This is made by adding a decoction of the shoots of pines to the water, but it is more convenient to use the oleum pini sylvestris in the proportion of one minim to the gallon. These baths are used in rheumatism, gout, paralysis, scrofula and skin diseases.

### VAPOR BATHS.

In these the body is exposed to steam instead of being immersed in hot water. The effect is much the same as that of the hot bath. The so-called Russian bath consists of a room filled with steam and provided with benches at various levels. The higher the level the greater is the heat, and usually, excepting on the lower benches, it is only possible to breathe with any comfort by holding a sponge dipped in cold water before the nose. From this room the bather goes to another where he is drenched with cold water by a douche, and is then quickly dried and allowed to rest for some time before dressing. These baths are chiefly used in chronic rheumatism. They are liable to the same objection as the hot bath, and to a still greater extent, for the inhalation of the hot steam produces greater difficulty of breathing, greater acceleration of the pulse, and greater tendency to syncope. Vapor baths, in which the body is only exposed to the action of the steam and the head is left out are much better. They are usually applied either by means of a kind of box in which the body of the bather is enclosed while the head remains outside, or else by introducing steam under the bedclothes which are supported by a kind of cradle, while the bedclothes are tucked tightly around the patient's neck to prevent the escape of the vapor. The latter plan is very useful in cases of dropsy and uraemia, as it induces a copious perspiration and does not exhaust the patient nearly so much as a hot bath. In case of acute rheumatism a vapor bath of vinegar has been recommended.

**Calomel Fumigation.**—This is used as a means of inducing the general action of mercury. The patient is seated naked on a wickerwork chair, underneath which is put a stand holding a cup containing 20 to 30 grains of calomel. The calomel is volatilized by means of a spirit lamp, and a blanket or water-proof sheet is



thrown around the patient so as to completely envelope himself and chair and the fumigating apparatus; the calomel fumes become condensed upon his skin in a fine state of division. It is absorbed with considerable rapidity, probably from becoming mixed with the sebaceous secretion from the skin, and the general action of mercury is quickly induced.

**Home Vapor Bath.**—A vapor bath may easily be prepared at home. Place a pail of hot water under a cane-bottomed chair, or if you have not one put a narrow piece of board across the pail; on this the patient should sit for half an hour, covered by a blanket reaching to the floor, so as to keep in the steam.

### AIR BATHS.

**Turkish Bath.**—The Turkish bath is usually taken in three rooms, although frequently there are more. The temperature of the first, or dressing room, is moderate, that of the second is higher, and that of the third is still higher. In the first room, the bather, after undressing, winds one towel around his loins, and a second around his head in the form of a turban. If he has any tendency to cerebral congestion, the second one may be wet. He then passes into the second room, where he usually waits a short time before passing into the third room. Some people, however, go directly into the third room. In both the second and third rooms, the bathers partake freely of cold water. A few minutes' stay in the warmest room is usually sufficient to make the bather perspire freely, and he then returns to the second or cooler room, where he may remain half an hour or more, according to circumstances. He may then be shampooed, the surface of the body being rubbed, the muscles kneaded, and the smaller joints extended. He is next washed with a lather of soap, and sluiced with basins of tepid or warm water. For some people it is most agreeable after this to be simply wrapped in warm towels and allowed to repose in the dressing room. Others prefer to finish up with a cold douche before proceeding to the dressing room. Here they remain resting for a considerable time before they dress again. Turkish baths are exceedingly useful in chronic rheumatism and gout, and in persons suffering from the effects of malaria. The chief objection to the Turkish bath is the length of time it takes. In some persons it has a weakening effect, but in many others it has none. The chief precautions



are not to stay too long in the hot room, and to leave it at once if giddiness or a feeling of tightness comes on. If the skin perspires with difficulty, the necessity for caution upon entering the hot room becomes still greater, and it is advisable rather to spend a longer time in the second room, and drink freely of water before entering the hotter room, if, indeed, this be entered at all on the first few times of bathing. Persons who suffer from a feeling of exhaustion after a Turkish bath should not take a cold douche nor plunge into water after perspiring, but should simply allow themselves to cool very gradually, and should take some stimulant, such as coffee, or beef tea, while doing so. Persons who suffer from malaria, also, should spend a good while in the second room before attempting to enter the third, as the sudden application of heat to the skin and lungs seem to irritate the vasomotor centres and cause chilliness, or even shivering.

### FRICTION AND INUNCTION.

Friction of the skin causes first a temporary contraction of the vessels, followed by a more or less permanent dilatation, so that the skin continues red for a length of time after the irritation has ceased. This redness is accompanied by a warm glow from the increased circulation in the skin and friction is therefore useful as an adjunct to cold baths. Besides this, friction along the extremities in an upward direction tends to aid the flow of lymph and thus to remove the product of waste from the muscles.

The fascia covering a muscle forms a pumping apparatus for removing waste-products from the muscles. It consists of two layers and between these are lymph spaces, some of which are seen in transverse, and others in longitudinal sections. Each time the muscle contracts it becomes thicker, presses the two layers of fascia together, and drives the lymph from the spaces onwards into the lymphatics. Each time the muscle relaxes, the layers of fascia tend to separate, and lymph from the muscle, carrying with it the waste product, fills the spaces between the layers. The action of the muscle itself thus tends to remove the waste-products which give rise to fatigue, but after over exertion their removal may be greatly aided by a gentle but firm upward friction, which will have a similar action on the fascia to the alternate compression and separation of its two layers, caused by the action of the muscle itself.

Gentle, firm friction thus lessens or may even remove entirely



the feeling of fatigue and weight in the extremities after exertion. When applied to the nape of the neck, or along the spine, it is sometimes useful in headaches, in nervous irritability, and in sleeplessness. When applied between the shoulders on persons suffering from flatulence, it appears to aid in the expulsion of gas from the stomach.

The effect of friction as a counter-irritant is greatly increased by the use of stimulating liniments. These are applied by pouring a little into the palm of the hand and then rubbing it over the body, or else by soaking a piece of flannel in the liniment and rubbing the skin with it. Liniment ammoniae applied thus to the chest is useful in the bronchitis of children; and linimentum camphorae compositum, B. P., or linimentum terebinthinae may be used in a similar way for adults.

In chronic inflammation of joints, liniments may be applied in a similar way. Sometimes it may be advisable in such cases to swathe the joint in a piece of flannel or lint, soaked in the liniment so as to procure more continuous application.

**Inunction.**—Metallic salts are very slightly, if at all, absorbed from the skin when applied to it in watery solution, and wiped off without being allowed to dry. But when applied in the form of ointments a considerable absorption takes place, especially if lanoiin be used as a basis. Advantage is taken of this in order to obtain the general action of some drug, without the local effect on the intestinal canal. For this purpose the ointments are rubbed on the skin, and especially on those parts where the epidermis is thin, as under the axillae and on the inside of the thighs.

Absorption also takes place, however, through the skin of the hands, and if the ointment is not rubbed on by the patient himself, but by another person, in whom the action of mercury is undesirable, it has been recommended that the latter should cover his hands with a piece of bladder thoroughly well oiled in order to prevent absorption.

In children, instead of applying the ointment by inunction, it is customary to smear it on a piece of flannel and to keep it applied to the abdomen of the child by means of a bandage.



## HYPNOTISM OR MESMERISM.

Hypnotism is supposed to be a power exerted by one individual over another. Of late years much has been said of it as a means of amusing, also for criminal purposes. Although one doubts such a power existing as sufficient strength to cause the total suspension of thought and remembrance, we do believe that there can be sufficient animal magnetism developed in one person to cause some influence to be felt by another, and as it has been claimed that sleep, loss of conscience and suspension of sensation can be produced by mesmerism, we will outline the method of producing this effect.

Those persons who wish to become operators should be courageous and full of self confidence. He should make up his mind not to think of failure and always feel that he will be successful ; he should impress his subject with his power to produce this effect and the subject should expect you to have the power and should not resist for unless they are willing you will always fail. Have your subject take a seat ; tell him that there is no danger, then he should place his right hand around his left wrist, putting his feet upon the floor, and close his eyes, and keep perfectly quiet. Now instruct him to do just as you tell him.

Let him remain in this position for two or three minutes when you will test him by taking one or both hands and make a few passes from the top of his head, or center of forehead, downward over the closed eyes. Keep talking and telling him to be perfectly passive.

After continuing the talking and making passes, for half a minute or more, close your hand upon his head with your thumb pressing against the forehead about an inch above the eyes.

Then say: "Now open your eyes, if you can," speak as if you did not think they could. If he is very sensitive to the influence he will find his eyes fastened.

If this fails have them look you straight in the eyes for a moment and again press as before on the upper part of the nose between the eyes, but more firmly and with a circular motion, and say firmly, "Now you cannot open your eyes."

Repeat until you succeed in closing his eyes, then when you succeed snap your finger at the left ear and say, "All right, now you can open them."



By continuing in this way you will soon succeed. When you succeed in doing this, you can have him clasp his hands over his head, then make a few passes over his hand pressing his hands together, and tell him to take them away if he can. When you succeed in this, make some passes from the shoulder down, also along his limbs and tell him he cannot get off his chair. When you succeed in this, again snap your finger at his left ear. Should you succeed in closing his eyes, fastening his hands and preventing him from getting off of his chair, you will have control of his whole muscular system. You can then make a few passes over his head drawing the fingers down along side of the nose, saying, "Your nose is bleeding."

Restore him by saying, "All right" and snapping finger at left ear.

You can then make a few passes and tell him he has forgotten his name. When you have been able to do all these you will have him completely under control and by making a few passes along his arm or limb and by telling him they are stiff and have no feeling, you can perform any operation without him feeling the least pain.

**To Produce Sleep**—Have the subject close his eyes, and then place your feet against and outside of his, then place the first two fingers of the hand over the eyes. The right fingers being over the left eye of the subject and the left over the right. Hold in this position for a few minutes, and talk continually, but keep your mind on sleep and try to feel sleepy. Then gently rub from the eyes outward and downward, once or twice, or make several passes in this manner, and tell the subject that he is going to sleep or about gone, then finally, he is asleep. It is said that a headache can be permanently cured by this method.



## CHANGE OF LIFE OR THE MENOPAUSE

Is the term given by medical men to designate the cessation of that function with which woman is endowed for the purpose of perpetuating the species.

It is the beginning of second childhood. When a child, she had strictly an individual life, then came womanhood, when she had wrapped up within herself, other beings beside her own, and now at this period the evening of her life, she is again changing from womanhood back to that individual condition which was her own when a child.

Every successive month, for more than thirty years, there has ripened in the ovaries of her body, a primordial germ of life, but with the change of life this physical function ceases and she may, if she has been governed with the principle of wisdom, look forward to a long and placid period of rest, blessed, and if she has borne children she will be honored by the paternal love alone which will beam with a brighter and purer flame than any which she inspired in the bloom of youth or the beauty of her maidenhood. But ere this haven of rest is reached, there is a crisis to pass, which is even the subject of anxious solicitude.

The period of life when this change begins, varies in different countries and in different parts of the same country, according to the climate. In the Middle States, from forty to fifty-five years being the most common time. In warmer climates this period will begin later while in cold climates, it will begin earlier, but there are instances when it does not appear until the seventy-fifth year, this being an exception.

The reproductive period of woman's life extends from about fifteen to forty-five or a period equivalent to one generation or thirty years, this being varied a few years, some commencing earlier than thirteen and of course continuing longer.

Examples of very early cessation of the menstrual flow are much more common than those who cease this function later.

We do not remember to have met any in our experience who ceased earlier than thirty-two years, but others have observed healthy women who began this change as young as twenty-two, but there are cases referred to by authorities as extremes and exceptions to the general rule.



Women do not ordinarily begin to look for manifestations of the approaching change until about the age of forty or past.

The physical change which is most apparent at the time is the tendency to grow stout. The fat increases as the power of reproduction ceases.

When the girl changes to be a woman, a similar deposit of fat takes place (though less in amount) which commences in the loins and this is the first signs of puberty, but in the change of life, the first signs are a deposit of fat at the lower and back part of the neck and on a level with the top of the shoulders.

This accumulation of fat often grows to form two distinct prominences and is an infallible index of the period of a woman's life. The breasts, as a rule, do not partake of this fatty increase but become hardened and flat, and the substance of the glands loses its spongy structure.

The arms and legs lose their roundness of outline, and where they do not grow fat, they dry up and resemble those of the masculine sex.

The abdomen increases greatly in size frequently reaching the proportions of an advanced pregnancy, sometimes misleading the wife and causing her to believe that she is about to become a mother, a delusion sometimes strengthened by the absence of the monthly sickness.

**The Menopause** is but a cessation of menstruation, frequently ovulation is continued to a much later period. Usually after the menopause begins, the ovaries become small and shriveled and resemble somewhat an almond or peach stone in shape and size.

The uterus and vagina diminish in size; the mouth of the womb becomes contracted and after a time closes entirely; the graffian vesicles present wrinkled walls, containing grayish paunches from which the fluid has been absorbed. Sometimes the cavities are affected and nothing is left but a small tubercular mass; the fallopian tubes diminish in size and even become obliterated. The upper portion of the vagina becomes shriveled and contracted into folds; these changes with irregularity in menstruation indicate unmistakably the decline of the reproductive functions, preparatory to its entire suspension.

Irregularity of menstruation can be expected about the forty-fifth year in temperate climates. There may be occasional absence of the menses, or it may be first indicated by frequent



and profuse hemorrhagic discharges at the regular monthly period.

It sometimes happens that the menses will cease suddenly without any warning, and are not attended by any special derangement or danger, again there may be a scanty menstruation, alternated by a profuse flow, this continuing for months before entirely ceasing.

Uterine hemorrhage occurring once a month, or at longer periods sometimes, almost constantly present, is common to the change of life, and one of the symptoms which should cause anxiety, as it may become so profuse as to endanger the life of the patient.

One may be surprised at the great amount of blood lost at this time, and wonder that life could be sustained.

**Profuse Perspiration** is also a common symptom. It becomes at times so profuse as to saturate the bed clothing, and occurs during sleep, and may be accompanied by hot flashes and great mental excitement, but it may occur entirely independent of either.

**The Heart** being a muscle, takes on the general flabby condition of the rest of the muscles of the body and becomes weak, there being incapacity for exertion with palpitation and a great deal of disturbance of the heart's action, sometimes causing the patient to suspect serious trouble from that source, but these symptoms generally disappear with the cessation of the menstruation.

**The Mental and Nervous Symptoms** are more marked, and in most cases with irregularity of the menses, is the only symptom that annoys the patient to any very great degree. At first, there may be but a slight loss of memory, which in time increases, sometimes amounting to entire momentary suspension of thought.

Frequently there is an entire change of disposition ; the kind, patient, forbearing, confiding and exemplary wife, soon becomes irritable, unreasonable and suspicious.

Her maternal modesty and motherly instincts may become so completely obliterated, that she will feel an almost uncontrollable desire to take the lives of her little ones, and the once happy woman becomes despondent, moody and taciturn.

She avoids amusements and has no tastes for company ; feels dizzy or light headed, with occasional pains in the back and top of the head ; she bewails her real and imaginary woes ; she



becomes melancholy, hysterical, and dwells upon every minute symptom and enlarges upon it, and feels that she is losing her mind, and actual insanity sometimes results from the profound disturbances which the system undergoes at this time.

**Hot and Cold Flashes** occur during the entire change ; they are of a lightning-like character, beginning at the feet and passing to the head, or from the head to the feet ; the face becomes pale alternately, with flashes of heat and cold.

**Headaches** become prominent symptoms, and many are of a neuralgic character ; a dull pain over the eyes, or sick head-ache; the result sometimes of constipation, which is a constant attendant, and the cause of many of the symptoms, is a result of the want of tone in the muscular fibres of the intestines.

**Flatulence** is generally present and adds to the general disturbance.

**Shortness of Breath** comes on from the slightest effort, and sometimes the patient will wake up from sleep greatly alarmed from this, as well as the attendant palpitation. The apparent stoppage of the heart causes great anxiety, but as long as she can feel the heart, she knows that she is not dying, but should it cease for a moment, she feels the greatest consternation.

Some women are more fortunate than their neighbors and do not experience the least discomfort at the change of life. They simply note that the flow has grown more scant until it ceases entirely, or at the expected time of the illness the flow does not appear and forever afterward they are free from it.

The popular notion is that the period of the menopause is one especially to be dreaded as peculiarly dangerous to women, but this is not true. Statistics do not show any increase of mortality in women during this period; in fact, more men than women die between the ages of 40 and 50; therefore, if women observe the laws of nature, she need have but little fear but that she will pass through this change of life safely.

The change of life is a natural process and it will be well to convince yourself that there is no special need of any indisposition during menopause. It is a natural, a pathological condition, and if you have lived according to the laws of nature you will experience no special suffering. If, however, the germs of disease exist in the sexual system, or organic affection, such as consumption, they may become aggravated at this time.

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The organic disease of the breast, uterus and ovaries are much more frequent during the menopause than at any other time of life. Cancers, tumors, polypi, sometimes the result of bruises from attempted abortions, or indurations, caused by frequent applications of caustics, take on active growth at this time.

**Skin Diseases** often become most troublesome, the intense itching keeping the patient awake at night, resulting in indigestion and derangement of the skin.

**General Directions.**—Women who have experienced much trouble at the change attending puberty, may anticipate serious difficulties during the menopause and should prepare themselves, and thereby abbreviating and sometimes entirely avoiding those symptoms that are so much dreaded by all women.

A well regulated regimen with such exercises as the system will be able to bear, will do much towards this end.

The food should be light and very digestible, consisting largely of fruits, oatmeal, porridge, rice pudding and soups.

If there be much debility, wine, bitters and proper stimulants to meet the attacks of palpitation, may be used.

If the patient has been used to high living, to rich and greasy food, composed largely of carbonaceous (starch, sugar and fat) a change to simple diet will do wonders, in a few days time, to relieve troublesome symptoms.

**Temperance** is a wonder worker, and a woman at this time should live a temperate life, mentally and physically, to insure placidity of mind and vigor of body.

The misery of womankind is to a very great extent, the result of the reckless violation of physical law.

By carefully following the laws of hygiene as pointed out in this work, a great amount of suffering will be avoided all along the journey of life.

**Tight lacing**, recently so fashionable in women, compresses the chest walls, thereby limiting the breathing, and inviting the germs of consumption. A corset should never be worn, except in cases of deformity. When a tree is young, it can be bent and compelled to grow in any direction, and for that reason corsets were invented to cure deformities of the chest, and not to cause them. Woman should know that lung power, as much as anything, contributes to health, longevity, and power of endur-



ance, and any time spent in the open air will be repaid in the better health sure to follow; and for this reason her room should be thoroughly ventilated, that the air may be pure, and as sweet as the outdoor air.

**The Dress** should be loose fitting, so as to permit of the motions of the body freely, and the material should be suitable to the season, being neither too cool nor too warm. When the perspiration is excessive, flannel should be worn next to the skin in the day time, and a flannel night-dress at night, and thus prevent taking cold.

**Baths.**—Bathing, when properly used will be found to be of much service in relieving many of the annoying symptoms. A sponge bath taken quickly in the morning upon rising, three or four times a week or even daily, when followed by friction from a Turkish towel, the hand or a flesh brush, will cause the skin to act freely, and improve the general health, and should there be much spinal irritation, such as flashes or chilly sensations, along the spinal cord, a sponge with cold water passed up and down the spinal column three or four times each morning, allowing free air before drying, causes a cool and pleasant feeling and gives tone to the nerves.

**Hot Sitz Bath** will be found useful in many cases of hemorrhage, and will often relieve the symptoms when other means fail, and can be taken at any time during the hemorrhage, or at frequent intervals between the times. A hot vaginal injection sometimes relieves the hemorrhage instantly; it should be hot enough to be slightly unpleasant to the hand.

In inflammation of the uterus or ovaries, these baths should be taken daily for a week or more, then on alternate days, and finally, two or three times a week, will relieve congestion and inflammation. They can be best administered with a Davidson's household syringe, or the fountain syringe can be used. It should be hung high enough to give considerable force to the water.

**Hot Fomentation** is useful in all kinds of inflammation and congestion, pain in the head, back and bowels, or in fact almost any portion of the body, will be quickly relieved by the application of moist heat. This can be done by wetting a towel or cloth in hot water and applying to the affected part, or the hot water



bottle can be used. The water should be very hot and continued for five or ten minutes, then repeated until relieved.

Pain in the back of the head will sometimes be relieved by the reverse and powdered or cracked ice placed in the water bottle may be kept on for an hour, or from three to four hours.

**Turkish Baths** taken two or three times a week, if the patient can afford it, is invaluable, as a remedy to improve the circulation. It also gives firmness to the muscles and relieves the congestion of the pelvic organs by causing the blood to flow more freely to the surface.

**Exercise** should be indulged in with caution. Severe mental or bodily effort, or exhaustion, should be avoided, but walking or riding in a carriage will do good, and freedom from care and anxiety and excitement should be insisted upon.

**Amusements** and occupations of all sorts are encouraged to distract the attention of the individual from herself, and thereby insure a better mood, as well as prevent melancholy, which depresses and produces troublesome symptoms of the menopause.

**Constipation.**—As a general rule, women suffer at this time with a general and habitual constipation. This must be corrected, and a daily movement of the bowels insisted upon. This can be accomplished, to a great extent, in regulating the diet to one composed mostly of fruits, cracked wheat, oatmeal, and other non-constipating food. But where the simple remedies fail, the saline cathartics and mineral water, epsom or glaubers salts, taken in teaspoon or tablespoon doses on rising of mornings, will relieve, on account of their depletory action.

**A Cup of Hot Water**, or even cold water, taken in the morning upon rising, will often be sufficient to secure an evacuation of the bowels.

**Flooding** is best treated by rest in a recumbent position. All stimulants should be avoided, as they increase the circulation and promote congestion. When these simple measures fail to give relief, the fluid extract of ergot, given in teaspoonful doses, to cause uterine contractions, and repeated in two or three hours, will give relief. The fluid extract of cotton root, in teaspoonful doses, will also be found useful.

Cinnamon tea is a domestic remedy of considerable value. It can be used by making a tea of the sticks, and taking teaspoonful



doses every three or four hours. Injections of a strong solution of alum in to the cavity of the womb has stopped hemorrhages when all other remedies failed.

Sanguinaria, given in five to ten drops of the tincture every three hours, will relieve the hot flashes.

**Sexual Excitement.**—With the appearance of the menopause, there sets in a gradual diminution of the sexual desire, but sometimes it happens that the patient will be troubled with a continual desire. She should look upon this as a dangerous symptom, as it is apt to indicate irritation of the ovaries or some disease of the uterus, such as cancer, tumors or polypus of the womb; and she should be careful how she indulges this desire, as any irritation now is apt to lead to serious results.

Bromide of potassium, or sodium, in ten to twenty grain doses, alone or combined with camphor, will soon allay any undue excitement; they also act as sedatives and diminish the blood supply to the uterus and relieve congestion. They are also indicated in headache so common at this time. It is remarkable how large a dose of bromide a woman can take at this time; and, besides relieving the pain, it overcomes the depression and melancholia. But care should be used in prescribing chloral, opium or bromides, as at this time women are more susceptible to the morphine and chloral habit than at any other time; for this reason, they should never be prescribed unless pains become constant or almost unbearable.

**Indigestion.**—That all-gone feeling, a result of indigestion, can be easily cured by a careful abstinence in diet. Two, even one light meal for several days, usually is sufficient; but in case it does not yield, the use of liquid pepsin in teaspoonful doses after meals, combined with a teaspoon half full of the fluid extract of yellow root, will quickly relieve these symptoms.

A spice plaster applied over the stomach, or binding a bag of gum camphor there, or, if these fail, an opium plaster, will hardly fail to be of service.

## INTERCOURSE AFTER THE MENOPAUSE OR CHANGE OF LIFE.

The gradual diminishing of the function of ovulation and menstruation, continues until about the age of fifty-five or sixty, when it ceases entirely. With the cessation of these two functions



certain changes have been accomplished; the breasts have become flabby, and pendulant; the uterus and ovaries decrease in size, the vagina shrinks or shrivels into folds and becomes narrower, and smaller at the top. There should also be a gradual decrease in sexual desire. Women are not as a rule capable of procreating after the menopause, and as passion is intended by nature to inform us that an ovule is ripe and ready for inpregnation, the same as hunger or thirst informs us that the stomach is empty and requires food to build up the system, all passion should naturally cease, and women should look with suspicion at any increase of the sexual desire after the menopause, and they should be careful how they indulge their passions, as there are no ovules to be impregnated; intercourse would be but a simple gratification and could not possibly be of any benefit. On the contrary, when indulged in to excess, it will cause congestion and inflammation of the womb and ovaries, and will often cause cancer of the womb, from the jarring or bruising which occurs during rough cohabitation.



## COOKING RECIPES FOR INVALIDS.

### SOUPS.

**Soup for an Invalid**—Cut in small pieces one pound beef or mutton, or a part of both; boil gently in two quarts water; take off the scum and when reduced to a pint, strain it. Season with a little salt, and take one tea-cup at a time.

**Tomato Soup**—Pour a quart of boiling water over a pint of canned tomatoes. Let them boil for an hour, or until they become soft, strain and return to the fire. Stir in a teaspoonful of soda. This will make it effervesce and while it is still foaming add a pint of boiling milk, a large piece of butter, pepper and salt. Thicken slightly with cracker dust and serve immediately.

**Maccaroni Soup**—A handful of maccaroni, broken into small pieces; put to one quart of boiling water and continue to boil for an hour; then add one or two cups of strained stewed tomato and half cup of cream. Serve at once.

**Chicken Cream Soup**—Boil an old fowl with an onion in four quarts of cold water until there remains but two quarts. Take it out and let it get cold. Cut off the whole of the breast and chop very fine. Mix with two hard boiled eggs, and rub through a colander; cool, skim and strain the soup into a soup pot; season, add the chicken and egg mixture, simmer ten minutes and pour into the tureen. Then add a small cup of boiling milk. This may be prepared without the onion.

**Chicken Broth**—Make the same as mutton or beef broth. Boil the chicken slowly, putting on just enough water to cover it well, watching it closely that it does not boil too much. When the chicken is tender, season with salt and a very little pepper. The yolk of an egg beaten light and added, is very nourishing.

**Chicken Broth**—The dark meat of half a chicken, one tablespoon of rice or barley, to one quart of water. Skim off any fat and use as soon as the rice is well done. It can be served alone or with bread toasted and buttered.

**Panada**—Break in a bowl two large crackers, sprinkle a little salt over them, and pour on boiling water enough to cover. When they look clear they are ready to eat. Some invalids like a little pepper over them, with water enough to be something like soup, and others prefer to keep the crackers whole, and slide them out on a saucer and eat with cream and sugar.

**Chicken Panada**—Skin the chicken and cut it up into joints; take all the meat off the bones and cut up into small pieces; put it into a jar with a little salt, tie it down and set it in a saucepan of boiling water. It should boil from four to six hours; then pass it through the sieve with a little of the broth. It could be made in a hurry in two hours, but it is better when longer time is allowed. Do not put the wings in the panada.



**Gruel**—Gruel can be made from oatmeal, wheat flour or corn meal. In all cases these things should be first mixed smoothly, with a little cold water and afterwards more water added; boil and season to taste. Two tablespoons of any of them is enough to make one pint when boiled. A few raisins boiled in gruel is an improvement.

**Gruel for Infants**—To make a gruel for infants suffering from marasmus, take one pint goat's milk and the yolks of two eggs boiled sufficiently hard to produce an impalpable powder; add one pint boiling water, a little salt or sugar, and administer by nursing bottle.

**Milk Porridge**—Two cups best oatmeal, two cups water, two cups milk; soak the oatmeal over night; strain in the morning and boil the water one-half hour; put in the milk with a little salt, boil up well and serve. Eat warm, with or without powdered sugar. In very warm weather the oatmeal may sour by morning and there is a dessicated oatmeal now sold which can be used without soaking over night.

### EGGS.

**Eggs as Food**—It has been said by an authority on physiology, that one egg is equivalent to one pound of beef, and eggs at the regular market price are very much cheaper, as well as more nutritious, easier digested and better assimilated than beef. The egg contains all the nutriment required to nourish the body, and like milk contains albumen, oil and saline matters sufficient to nourish the animal life as well as the young chick. For convalescents, one or two eggs properly cooked and served with buttered toast will be greatly relished and will give as much nourishment as three times its bulk of meat.

**Eggs for the Sick**—To prepare an egg for a sick person, beat the egg until very light; add seasoning to taste and then steam until thoroughly steamed through. This will not take more than two minutes. The most delicate stomach will be able to digest it.

**To Boil Eggs**—To boil an egg just right seems to be a very simple matter, yet where there is a member of the family who is particular in having his egg boiled in just such a manner, it isn't quite as easy to do as it seems. It is anything but pleasant for a person to ask for a soft-boiled egg and receive one just warmed through, or a hard boiled one and get it so that the yolk will run. Three minutes is the time allowed for a medium boiled egg, five minutes for a hard boiled one, and one-half or two minutes for a soft boiled one. Always count from the time the egg commences to boil.

**Soft Boiled Eggs**—Pour boiling water on a fresh egg in a teacup, cover with a saucer and let it stand for five minutes or more. If two eggs are to be cooked, a small bowl may be used. This plan prevents the coagulation of the white and is very delicate.

**Escalloped Eggs**—Five hard boiled eggs, one-half cup gravy or drawn butter, one cup bread crumbs, three-fourths cup minced cold meat—the rabbit left from yesterday, or better still, cold ham or tongue: if none of these are forthcoming, buy one of the small cans of devilled meats that come at a low cost, and use that; butter the bottom of a pie plate or a shallow pudding-



dish and cover with a layer of meat; over this spread the hard boiled eggs, sliced, and pour in the gravy; sprinkle the bread crumbs over all, pepper, salt and dot with bits of butter; bake covered ten minutes and then brown.

**Scrambled Eggs**—Heat the spider and put in a little butter; have the eggs broken into a dish, salt and pepper them; add a small piece of butter; beat up just enough to break the eggs, then pour into the buttered spider; scrape them up from the bottom with a thin knife to prevent their sticking fast; do not cook too dry.

**Egg Omelet**—Beat the whites of six eggs separately; beat the yolks with three tablespoons of milk and one tablespoon of flour; stir the whites in lightly. Cook in a buttered skillet. When the edges are cooked, turn over carefully; in two minutes more, double together on a hot platter. Use no salt.

**Egg Toast**—Beat four eggs, yolks and whites together, thoroughly; put two tablespoonsful of butter into a saucepan and melt slowly; then pour in the eggs, and heat without boiling over a slow fire, stirring constantly; add a little salt, and when hot spread on slices of nicely-browned toast and serve at once.

**Egg Cream**—Beat raw egg to a stiff froth; add one tablespoon of white sugar and one-half glass home-made blackberry or black cherry wine; beat well; add one-half glass cream; beat thoroughly and add at once. This is a full meal for an invalid, and is especially good where trouble of throat, mouth or stomach prevents solid foods being used.

**To Bake Eggs**—Butter a clean, smooth saucepan, break as many eggs as will be needed into a saucer, one by one. If found good, slip it into the dish; no broken yolk is allowed, nor must they crowd so as to risk the yolk breaking after being put in; put a small piece of butter on each, and sprinkle with salt and pepper; set in a well-heated oven and bake till the whites are set. If the oven is rightly heated, it will take but a few minutes and they are far more delicate than fried eggs.

**To Poach Eggs**—Have the water well salted and do not let it boil hard; break the eggs separately into a saucer and slip gently into the water; when nicely done, remove with a skimmer, trim neatly and lay each egg upon a small square of buttered toast; then sprinkle with salt and pepper. Some persons prefer them poached, rather than fried with ham, in which case substitute the ham for the toast.

## OYSTERS.

**Raw Oysters** are the easiest digested and this is due to the large amount of diastase or glycogen in the liver; the large fat oysters being almost half liver. This diastase is destroyed by cooking. To improve the flavor, a little vinegar, salt and pepper may be added, but too much vinegar or condiments impair their digestibility. On account of their being easily assimilated, oysters are very useful in nervous dyspepsia, as well as in the treatment of morning sickness in the early months of pregnancy.

**Oyster Soup**—Two quarts oysters, one quart milk, two tablespoons



butter, one teacup hot water, pepper, salt; stir in all the liquid from the oysters, add the water and heat; when near the boil, add the seasoning, then the oysters; cook about five minutes from the time they begin to simmer, until they "ruffle;" stir in the butter, cook one minute and pour into the tureen; stir in the boiling milk and send to table; some prefer all water in the place of milk.

**Oyster Stew with Milk**—One and one-half cups of milk, one cup water, oyster liquid, butter size of walnut, pepper and salt to taste, one-half cup cracker crumbs; bring the liquid to a boil, add the cracker crumbs and the oysters, boil one minute and take from stove.

**Oyster Toast** can be made by pouring stewed, well-seasoned oysters over toasted graham bread or gems and makes a good and nutritious breakfast.

**Steamed Oysters**—Drain some select oysters; put into a pan and place in a steamer over boiling water; steam until the oysters begin to curl, and then serve on a hot dish, with butter, salt and pepper; garnish with chopped pickles.

## BREADS.

**Bread**—Although bread contains many elements necessary to sustain and build up almost every part of the system, yet by bread alone we would starve to death. Bread that is calculated to be used as a food should contain all of the primary elements of the grain. Most of the bread that is consumed is deficient in gluten, it having been removed in the bran and because of its removal, bakers and others, in order to have light, puffy bread have to resort to baking powders and other artificial means of raising. A good quality of flour, one that contains all the grain elements, should never raise but once with yeast as it, to a certain degree, destroys the gluten.

**Brown Bread**—Take two quarts corn meal; scald with one quart of Graham flour, one large spoonful salt, one cup brown sugar or best molasses one cup home-made yeast, one cup flour. Mix with warm water until it can be easily stirred; put in deep basins, steam two hours and bake one. Before baking baste with a few spoons of sweet cream or milk; this makes a tender, soft crust.

**Biscuit** is made from the same dough as the bread, rolled out and spread with a small quantity of lard which must be very fresh and sweet. Double the dough together, roll and spread again three times. Then cut in small biscuits; place on buttered tins, let stand one-half hour; bake fifteen minutes until very brown. Cover with a cloth a few minutes and slip off on the same until ready for use. All bread, biscuits, loaf cake or doughnuts made from yeast should rise, after being mixed, before being baked; if put into the oven or fried directly, they are never light, as the dough has no chance to recover its elasticity.

**Bread for Dyspeptics**—One pint barley,  $\frac{1}{2}$  pint graham flour, one teaspoon salt, two teaspoons baking powder, one pint of milk. Sift together barley meal, graham flour, salt and powder. Mix into a firm batter with



the milk, pour into a greased tin and bake in a moderate oven forty minutes; cover with a greased paper the first twenty minutes.

### PUDDINGS.

**Plum Pudding**— $\frac{1}{2}$  pound raisins,  $\frac{1}{2}$  pound currants,  $\frac{1}{4}$  pound citron,  $\frac{1}{2}$  pound candied fruit,  $\frac{1}{2}$  pound beef suet,  $\frac{1}{2}$  pound sugar,  $\frac{1}{2}$  pound mixed flour and bread crumbs, four eggs, spices to taste; boil four hours.

**Cocoanut Pudding**—Soak sufficient stale bread to make a pudding the size you require. After it is well soaked, take a fork and see that no lumps of bread remain; then add  $\frac{1}{2}$  cup grated cocoanut; make a custard of one quart of milk and four eggs, flavor with nutmeg, sweeten with white sugar; pour over and bake immediately.

**Corn Starch Pudding**—One and one-half quarts of milk put on the stove to boil; while heating, stir together four heaping tablespoons corn-starch, yolk of one egg,  $\frac{1}{2}$  cup sugar, salt, one teaspoon extract of lemon, cold milk enough to mix this batter together; then stir it into the boiling milk and pour into the pudding dish; beat the white of one egg, add one tablespoon sugar, frost the top and set in the oven to brown. Serve with a sauce of cream and sugar.

**Corn Starch Pudding, No. 2**—One pint milk, whites of three eggs, two tablespoons corn starch and a little salt. Put the milk in a pail in a kettle of hot water, and when it reaches the boiling point add the starch dissolved in a little cold milk, let it cool a very little and add the whites of the eggs whipped to a stiff froth, beat well and fill cups about half full. Set in a cool place.

For sauce make a boiled custard. Bring to the boiling point one pint of milk, add three tablespoons sugar, then the beated yolks, thinned by adding one tablespoon milk, stirring all the time until it thickens; flavor with two teaspoons lemon or vanilla; set to cool. In serving, put one of the molds in a saucer and pour over it some of the custard.

**Huckleberry Bread Pudding**—Heat one quart of milk and pour it over one pint of dry bread crumbs; cool, and add two beated yolks of eggs, three tablespoons of sugar, two well whipped whites. Stir in one pint of huckleberries, dredged with flour, bake in a pudding dish set in a pan of boiling water forty or fifty minutes.—*Hygiene Cookery*.

**Orange Pudding**—Pare and slice five large oranges, removing seeds. Lay in a deep dish and sprinkle with half cup sugar; let them stand two hours. Make a custard of one pint of milk, yolks of three eggs, two tablespoons cornstarch. When cool pour over the oranges. Beat the whites with two tablespoons of powdered sugar and place on top, brown quickly in the oven.

**Rice Pudding**—One quart new milk, two tablespoons rice, two tablespoons sugar, pinch of salt, one teaspoon lemon extract, or if preferable, half cup of raisins. Bake three hours in a moderate oven. For summer it is delicious. Better made in a large quantity.

**Apple and Rice Pudding**—Three pints tart, chopped apples; one



quart boiled rice; half cup sugar; put in layers in earthen baking dish; then add a half cup water. Use plums, raisins or prunes to flavor; serve with sweet cream, warm or cold.

**Rice and Berry Pudding**—Two cups sweet milk, two cups cold rice, samp or barley; two cups blueberries, currants, strawberries, seeded cherries or chopped apples; one-third cup sugar, two eggs, yolks and whites separate. Time, one hour; slow oven. Soften the cold rice (or other grain) with milk, working out all the lumps, then stir in the yolks and sugar beaten together, and also the well whipped whites. Add the fruit, mixing it in lightly; pour the batter into a dish, set in a dripping pan of boiling water and bake slowly one hour. Serve cold or luke-warm, with or without a dressing of cream.

**Tapioca Apple Pudding**—Cut in slices six tart apples; one teacup of tapioca soaked in a quart of warm water three hours; stir in the apples; add half cup of sugar and bake three hours. To be eaten with whipped cream, warm or cold.

**Corn Meal Fruit Pudding**—One pint corn meal mush; one pint stewed dried peaches, apples or prunes; then half pint of water; one cup of sugar; stir and bake five hours.

**Apple Pudding**—One pint rolled bread crumbs, two pints chopped tart apples, half cup of seedless raisins, place in earthen pudding dish in layers, add one cup of water, bake two hours in slow fire. Any other fruit can be substituted for the apples.

#### CAKES.

**Graham Cake**—One cup sugar, two eggs, half a cup sweet cream, one cup flour, one teaspoon of baking powder. Bake in a deep tin, adding currants and chopped raisins and baking in small cake tins makes a nice children's cake.

**Strawberry Short Cake**—Bake a short cake in three thin layers. Then put strawberries between, having them mashed and sweetened. On the top layer and all about the side of the dish, put your finest large berries. This needs no sauce.—*Dr. Fairchild.*

**Apple Pie Cake**—Flour of the entire wheat and cold water, make a batter soft enough to level itself. if shortening is desired, use sweet cream. Fill a deep pie platter a third full of the batter, sprinkle over with a little sugar. Wash, quarter and core tart apples and place as many in the batter (skin side up) as it will hold. Press down and level with a spoon. Over the top sprinkle sugar and bake until brown.—*Dr. Holbrook.*

**Graham Fruit Roll**—To one and a half cups sifted graham flour add three cups sifted white flour. Mix with two cups sweet milk, one teaspoon soda and two of cream tartar. Roll the dough into two oblong sheets about a quarter of an inch thick. Put the layers of fruit between and on them, using one cup of each chopped raisins and dried currants. Roll closely, pinching the ends firmly together to secure the fruit. Bake in a moderate oven one hour.—*Hygiene Cookery.*



## PIES.

**Strawberry Pie.**—Place the under crust on a deep plate and the upper one (cut just the right size) on a flat tin or sheet iron; prick to prevent blistering and bake. Fill the deep crust while hot with strawberries and cover with the flat crust. If the fruit is rather hard, replace in the oven till heated; if quite ripe the crust will steam sufficiently.

**Blackberry and Raspberry Pie** can be made in the same way. The flavor of these delicious berries, when quite ripe, is greatly impaired by cooking; they are also changed to a mass of little else than seeds and juice.—*Mrs. Cox's Hygiene Cook Book.*

**Pie for Dyspeptics.**—Four tablespoons of oatmeal, one pint of water; let stand for a few hours, or till the meal is swelled. Then add two large apples, pared and sliced, a little salt, one cup of sugar, one tablespoon flour. Mix well together and bake in a buttered dish. This makes a delicious pie, which can be eaten by the sick or well.—*Dr. Holbrook.*

## JELLIES.

**Beef Jelly for Invalids**—Three small onions, three small or one and one-half large carrots, a few whole cloves and black pepper, one small teaspoon sugar, one slice ham, two calf's feet, one and one-half pounds beef; put in the onions and the other ingredients in succession; place the ham on top, then the calf's feet and lastly the beef; no water; put on the side of the range and let it stand until reduced to a soft mass; then add one quart water and let it boil one hour; strain and let stand until cold, then take off the fat. Use by dissolving a little in hot water,

**Milk Jelly**—As a variation in milk diet, the following is recommended by Prof. Liebreich: Heat one quart of milk with one pound of sugar and when the sugar is dissolved continue the heat at a boiling temperature for about ten minutes. Now cool it well and then add slowly stirring a solution of one ounce of gelatine in one cup of water; next add the juice of three or four lemons; set the glasses containing the mixture in a cold place, so that the contents may gelatinize. It is necessary to have the milk quite cold before the other ingredients are added, as it would otherwise curdle.

**Arrow Root Jelly**—One cup boiling water, two heaping teaspoons best Bermuda arrow root, one teaspoon lemon juice and two teaspoons white sugar; wet the arrow root in a little cold water, and rub smooth; then stir into the hot water, which should be on the fire and actually boiling at the time, with the sugar already melted into it; stir until clear, boiling steadily all the while, and add the lemon juice; wet a cup in cold water, and pour in the jelly to form. Eat cold with sugar and cream, flavored with rose water.

**Tapioca Jelly**—Wash one ounce of tapioca well; then soak in one quart of fresh water, five or six hours; add the peel of a lemon and set all on to heat; simmer till clear; add the juice of the lemon, with wine and sugar to taste.



## DRINKS.

**Currant Jelly or Cranberry Juice** mixed with water makes a pleasant drink for invalids.

**Acid Drinks**—1st. Peel or wash 60 or 70 Malaga grapes and pour one pint boiling water upon them; cover them and let stand until the water is cold.

2nd. Pour one pint boiling water upon two tablespoons currant jelly and stir until the jelly is dissolved.

3rd. Tart berries may be used in the same way to make very refreshing acid drinks for persons recovering from fevers.

**Cherry Shrub**—Gather ripe Morello or red, sour cherries; pick them from the stalk, and put them in an earthen pot, which must be set in an iron pot of water; make the water boil, but take care that none of it gets into the cherries; when the juice is extracted, pour it into a bag made of tolerable thick cloth, which will permit the juice, not the pulp, of the cherry to pass through; put one pound sugar to one pint juice and when it becomes perfectly clear, in bottle; put one-half gill spirit into each bottle before you pour in the juice; cover the corks with rosin; cherry shrub will keep all summer in a dry, cool place, and is delicious mixed with water.

**Jelly Drinks**—A little jelly or fruit syrup dissolved in a goblet of water with a little sugar, is a refreshing drink. Lime juice squeezed into lemonade gives it a tart but pleasant flavor. A little orange juice is also an improvement in nearly all summer drinks.

**Mead**—Three pounds brown sugar, one pint of molasses, one-fourth pound tartaric acid; mix; pour over them two quarts boiling water; stir till dissolved; when cold, add one-half ounce essence sassafras and bottle; when you wish to drink it, put three tablespoons of it in a tumbler, fill one-half full with ice water, add a little more than one-fourth teaspoon soda. An excellent summer beverage for the sick.

**Lemonade**—Take thin-skinned lemons; roll them on the table till very soft; slice very thin with a sharp knife into a large pitcher, averaging one lemon to a person, thus allowing them two glasses a piece; put into the pitcher, with the sliced lemon, one cup of white sugar to five lemons, or more if you want it sweeter, and pound altogether well with a potato masher; put in a lump of ice and let it stand a few minutes, then fill the pitcher with ice-water. This makes lemonade that is lemonade, and the peel in the pitcher is delicious. Hot lemonade is made the same way, omitting the ice and using hot instead of cold water.

**Flaxseed Lemonade**—This is very useful in diseases of the bladder and kidneys. Two tablespoonfuls of flaxseed to a pint of boiling water; two tablespoons of honey or sugar; juice of two lemons. Strain and let stand until cool.

**Egg Lemonade**—Juice of one lemon with one white of egg, one tablespoonful of sugar to one glass of water. Thoroughly mix. A very acceptable drink in all low fevers.



**Orange Whey** makes a good drink after confinement. It is made by taking the juice of one orange to one pint of sweet milk; heat slowly, until it curdles then strain and cool.

**Milk** is a natural food and contains all the necessary ingredients to sustain and prolong life for an indefinite period. Milk when heated to a point above 100° F. loses for a time its denseness and some of its sweetness. As a drink when heated nothing will surpass it. When slowly sipped, thus thoroughly incorporating with the saliva of the mouth and begins to digest as soon as it reaches the stomach and is almost as rapidly absorbed by the lymphatics and for this reason it should be used more freely as a summer drink as well as winter. There is nothing that will restore exhaustion so quickly as hot milk. Take eighteen parts of milk and two of water, then heat to a temperature of 110°. Sip slowly. The water will prevent coagulation. For nursing women and morning sickness of pregnancy it is very useful. In the latter a little saturated pepsin will increase its value.

**Buttermilk** contains all of the ingredients of sweet milk with the exception of the fat and as a drink it is very wholesome. It contains about 80 per cent. of water, 4 of nitrogen and 3 of sugar, and but a small trace of fat, with about 5 per cent. of mineral matter and lactic acid. Buttermilk will be found useful where it is desired to reduce the amount of heat and fatty substances of the food. In fevers it relieves the thirst quicker than any food or drink unless it be acid lemonade. It is often borne by the stomach when all other food is rejected. As a food it is next to sweet milk. In diabetes mellitus it often takes the place of all other foods and as is used as a cure. This is called the milk cure for diabetes. The corpulent who do not desire to follow other diets, can, if they take a large amount of exercise and associate it with fruits, get rid a large amount of tissue. Buttermilk can be bottled and kept for a considerable length of time, but in most cities it will not be necessary as it is now kept by all creameries and dairies.

**Sago Milk**—Three tablespoonfuls of sago; one cup of cold water; let stand one hour, then add three cups of boiling milk; sweeten and flavor to taste; simmer for half an hour and serve hot. Tapioca milk is made in the same manner.

**Beef Tea**—It is not a food but simply a stimulant, the composition of which is very similar to urine, and its use should never be advised except in cases where a stimulant is desired and not even then as other simple stimulants will be found of much more service. A patient will starve to death on beef tea almost as quickly as upon water alone.

**Beef Tea**—Cut all the fat from one pound of beef, then cut the lean meat into small dice-like pieces; add one pint cold water to draw out the juices; boil twenty or thirty minutes, skimming it carefully, then strain and salt to taste.

**Toast Water or Crust Coffee**—Take stale crusts of bread, toast them a nice dark brown, care to be taken that they do not burn in the least, as that affects the flavor. Put the browned crusts into a large pitcher and pour enough boiling water over them to cover them; cover the pitcher closely



and let stand until cold. Strain and sweeten to taste; put a piece of ice in each glass.

**Koumiss**—Dissolve four ounces white sugar in one gallon skimmed milk, and place in bottles of the capacity of one gallon; add two ounces baker's yeast, or one cake of compressed yeast to each bottle; cork and tie securely and set in a warm place until fermentation is well under way, then lay the bottles on their sides in a cool cellar. It will be good in three days.

**Slippery Elm Tea**—Break the bark into bits, pour boiling water over it, cover and let fuse until cold. Sweeten, ice and take for summer disorders, or add lemon juice and drink for a bad cold. Put one teaspoon powdered slippery elm into a tumbler, pour cold water upon it and season with lemon and sugar. It is a valuable remedy in disease of the kidneys and is sure to cause lean people to become fat.

### TOASTS.

**Milk Toast**—Place the milk to heat, mix a teaspoonful of flour smoothly with a little milk, stir it in, and let it to come just to a boil, with a piece of butter the size of an egg to a quart of milk and some salt. Place your toast on a deep dish and pour some gravy over it.

**Cream Toast**—Take slices of stale bread, one quart of milk, three tablespoons butter, whites of three eggs beaten stiff, salt and three tablespoons flour. Toast the bread to a golden brown, have a dish one-half full boiling water in which one tablespoon butter has been melted; as each slice is toasted dip it in this for a second and lay in the deep heated dish in which it is to be served. Have ready, by the time the bread is all toasted, the milk scalding hot, but not boiling; thicken this with flour; let simmer until cooked, put in the remaining butter, and when this is melted the beaten whites of the eggs; boil up once and pour over the toast, lifting the slices that the cream may run between; cover closely; set in the oven a few minutes before sending to the table. It is good without the eggs.

**Quail on Toast**—Pick and clean, cut in the middle of the back, fry in butter to a nice brown, salt and pepper; now put in an earthen or porcelain-lined dish, one tablespoon nice butter and the same of flour; stir on a slow fire until the butter is dissolved; then pour in slowly two-thirds glass of water and the same quantity of wine; salt and pepper; put in your birds that are nicely fried, simmer slowly one-fourth an hour; toast some thin slices of bread (one toast to each bird); put in the dish you wish to serve, laying the birds on top; pour your gravy over all; serve very hot.

**Rhubarb Toast**—To one pint of water add one-half cup of sugar, let come to a boil then put in two and one-half pounds of rhubarb cut into small pieces; stew until the rhubarb is done, let cool and pour over several slices of hot toasted bread with a little butter. Tart or acid fruits, such as peaches, apples or gooseberries, can be prepared and served in the same manner and will be relished by those who at other times do not care for rhubarb. Graham bread is best for all purposes and will not become soggy or doughy.



**Asparagus on Toast**—Tie the bunch of asparagus up with a soft string when you have cut away the wood and cook about twenty minutes in salted boiling water. Have ready some crustless slices of toast; dip each in the asparagus liquor; butter well while hot and lay upon a heated dish. Drain the asparagus and arrange upon the toast. Pepper and salt and butter generously. If desired, break an egg over each, and place in a hot oven until the whites are firm.

#### MISCELLANEOUS.

**Baked Pie Plant**—Place two pounds of pie plant, cut in small pieces, into a pudding dish; sprinkle one-half cup of bread crumbs and half cup of sugar; add sufficient water to cover two-thirds. Bake quickly for thirty-five or forty minutes. This makes a very palatable and acceptable dish, and removes the rhubarb flavor.

**To Make Gravy without Meat**—Melt a little butter in the skillet to prevent sticking; one half cup of milk, one tablespoonful of flour, stir until smooth; boil a pint of milk and stir the above in slowly, add half a teaspoonful of salt and remove.

**Maccaroni**—Half a pound of maccaroni, parboil, then mix with half cup of cheese cut into small slices; add half a teaspoonful of salt; lay in layers and put into a baking dish and cover with boiling milk or water and bake two hours in a moderate oven.

**Scalloped Tomatoes**—Place alternately in layers bread crumbs with tomatoes, (crackers or slices of toast may be used), finishing with the tomatoes on top layer; then add a little salt and bake slowly in a covered dish for an hour or more, then remove cover and let brown.

**Tomatoes with Corn**—Cook the tomatoes half an hour, then add  $\frac{1}{3}$  as much green corn, cut from the ear. Stew slowly for half an hour, stirring occasionally.—*Hygienic Cooking*.

**Corn Mush**—Take boiling water (soft is preferable) salt to the taste, add meal very slowly so as to prevent any lumps being formed; cook thoroughly.

**Cracked Wheat Mush**—To one quart water add three-fourths cup of cracked or rolled wheat, and boil two hours; or it may be soaked over night and boiled one hour. Eat hot or cold with sugar or fruit juices in constipation.

**Apple Omelet**—Eight large apples, four eggs, one cup of sugar, one tablespoon butter, nutmeg or cinnamon to taste; stew the apples and mash fine; add butter and sugar; when cold, add the eggs well beaten; bake until brown and eat while warm.

**Baked Apples**—Core with a corer and pare two or three tart apples; place in a pan and fill the cavities with sugar. Bake slowly until tender.

**Apple Dumplings**—Make them the usual way, place them in a deep pudding dish; make a liquor of water, sugar, butter and a little nutmeg; the



liquor should very nearly cover the dumplings; bake on one side, turn them on the other; bake about  $\frac{3}{4}$  an hour.

**Apple Snow**—Take apples, not very sweet ones, and bake till soft and brown. Then remove the skins and cores; when cool, beat them smooth and fine; add half cup granulated sugar and the white of one egg. Beat till the mixture will hold on your spoon; serve with custard.—*V. Mills*.

**Peaches a la Strawberries**—Ripe peaches cut in small pieces, with soft, mild eating apples in the proportion of three peaches to one apple, mixed with sugar and left to stand two or three hours, makes excellent mock strawberries.—*Kansas Home Cook Book*.

**Baked Pears**—Take a stone jar, and fill it with alternate layers of pears, (without paring) and a little sugar until the jar is full, then pour in as much water as the jar will hold. Bake in a moderate oven three hours.—*Kansas Home Cook Book*.

**Stewed Raisins**—Take one pound best raisins, pick them free from stalks; cover in a dish with cold water, steep over night, put them in a stew pan and bring to the boiling point, then simmer until the skins are quite tender; turn into a dish to cool, and they are ready for use. This with bread is an excellent dish for persons of weak digestion or for invalids.

**Prepared Beef**—Take one pound of lean beef and remove every particle of fat from it and scrape it up with a very sharp knife into a perfect pulp then with a knife and fork (a knife that is sharp) mince the pulp still finer, put it in the sauce-pan with salt and pepper to taste, 1 tablespoonful of cold water, two tablespoonsful of rich sweet cream, a piece of fresh butter the size of a hen's egg and set it on the stove to cook, stirring it constantly. When it has been cooking one or two minutes but still looks rare, stir in one tablespoon cracker dust and one teaspoon mixed mustard. If you have no cracker dust, take one teaspoon of flour with butter and stir that in; stir well and let it cook one or two minutes, but not too long or it will inevitably be spoiled. Take it up while it is yet rare, or at most only just done. Use the same proportion in preparing a larger quantity for the table. It makes a charming breakfast dish.

**Rice Griddle Cakes**—Rice griddle cakes are very delicious. The rice is cooked until perfectly soft, drained dry, mashed with a spoon until the grains are well broken up. For each cup of rice take two eggs, one pint of milk, one heaping teaspoon baking powder, one-half teaspoon of salt, and flour enough to make a thin batter.

**Rice.—Japanese Method**—Only enough water is poured on the rice prevent burning. Cover tightly and set over a moderate fire until nearly done. Remove cover to allow moisture to escape. The rice turns out a mass of snow white separate kernels, each burst open like a mealy potato.

**Boiled Rice**—Three pints boiling water; two cups of rice and teaspoon half full of salt; cook in steamer for four hours or in a stew pan until rice becomes tender.

**Cream of Rice**—Cream of rice is a dainty dish to set before the king



or greater than the king, the convalescent friend. Things taste better for coming in unexpectedly, and the friends of invalids would do well to rack their brains for some pretty novelty to awaken appetite or restore exhausted strength. To make the cream of rice, boil the uncooked breast of a fowl and a cup of rice in chicken broth soft enough to rub through a sieve; thin the paste thus formed with boiling milk, seasoned with salt, pepper and nutmeg to the consistency of thick cream.

**Raisins with Rice**—Half cup raisins; one cup of rice; one cup sweet milk; three cups boiling water; mix well and cook in steamer. Mould and serve warm or cold with fruit sauce or cream.

**Rice or Corn Starch Snow**—Five tablespoonfuls of rice flour or corn starch; one quart of sweet milk; one cup of sugar; whites of four eggs; boil the milk, moisten the flour and stir in; now add the sugar. When cold and the eggs are well beaten, whip a little at a time, mould and serve with cream or fruit sauce.

**Rice Snow Balls**—Two cups of rice; one pint boiling water; cook two hours in steamer or farina boiler without stirring; mould in small cups and serve with boiled custard.

**Fruit Sauce**—Boil the juice of any fruit with an equal part of water. to half pint of this, half teaspoon of corn starch and teaspoonful of sugar. It will then be a clear juice about like syrup; this can be eaten with mush, gems, wheat or griddle cakes and puddings.

The above is a valuable sauce for invalids or children, and persons in health relish them. Jellies or jams can be made into sauce by adding three or four times the quantity of water and thickening.

**Berry Sherbet**—Crush one pound berries, add them to one quart water, one lemon sliced, and one teaspoon orange flavor if you have it. Let these ingredients stand in an earthen bowl for three hours; then strain, squeezing all the juice out of the fruit. Dissolve one pound powdered sugar in it, strain again, and put on the ice until ready to serve.



## **BILL OF FARE**

from which persons suffering with indigestion or constipation may select their meals.

### **Oysters**

Raw. Plain Stew. Milk Stew.

### **Soups**

Veal, beef, mutton, chicken, oyster, turtle and vegetable.

### **Meats**

Beef roast, boiled or corned beef or steak; lamb and mutton, calves' liver kidneys, tripe, giblets, cold tongue, smoked or stewed bacon, or boiled ham.

### **Game of all Kinds**

Rabbits, squirrel, quail, wild duck, goose and snipe.

### **Eggs**

Poached, boiled, raw or soft fried.

### **Vegetables Steamed or Stewed**

Kale, spinach, dandelion, rhubarb, cauliflower, oyster plant, parsnips, turnips, asparagus, beets, tomatoes.

### **Salads**

Lettuce, tomato, water-cress, beet, dandelion and cold slaw.

### **Fruits and Berries, all Kinds**

Apples, stewed or baked, cranberries, prunes, peaches, cherries, tomatoes.

### **Bread Stuffs**

Home-made bread, rye, and brown bread, dry toast, cold biscuits eaten with butter. Bread should always be thoroughly masticated and incorporated with saliva, which is the natural digestive, but avoid wetting with tea or coffee.

### **Drinks**

All drinks should be warm except wines and milk, hot coffee, tea, milk, and hot water; clam, bouillon, beef tea, chocolate, cocoa, koumiss, ale, porter, claret or rhine wines taken after meals.

In making soups, alternate daily with beef bone, veal or chicken, using no starchy stuff, but season well with red pepper, celery salt, tomatoes, carrots or toast bread.

Persons with a badly irritated stomach with much inflammation or ulceration, or when they are old and enfeebled, or have lost their teeth, should eat only hot soups or milk with dry buttered toast, avoiding meat or cutting it very fine.

By selecting such articles as are known to agree with the patient and marking off the others, a diet will be found to take the place of medicine.



Persons afflicted by constipation should avoid the following articles of food as they constipate.

### **Bread Stuffs.**

Hot buckwheat cakes, hot corn or wheat cakes, hot pancakes of all kinds, hot biscuits, rolls, waffles, hot corn or wheat bread.

Oatmeal, oatflakes, cracked wheat, hominy, corn, potatoes, all forms, mush, macaroni, noodles, beans, peas, cereals, pies, puddings, Welsh rare-bit, potato salad, strawberry short cake.

### **Meats.**

Fresh pork, pork sausage, veal, ham, fried and boiled, weinerwurst, liver and blood pudding.

### **Soups.**

Potato, bean, noodle, macaroni and pea soup.

### **Shell Fish.**

Fried oysters, crabs, clams, and lobsters and mountain oysters.

### **Vegetables, Berries, Fruits and Nuts.**

Boiled cabbage, onions, cucumbers, pickles, strawberries, bananas and nuts.

### **Cheese.**

Limberger, New York cream, Swiss, cottage and all kinds.

### **Drinks and Ices.**

Ice cream, ice cream soda, cold milk, ice water, iced tea; ices, iced drinks of all kinds.

When any kind of cold drinks are used they should be taken slowly, and during eating, they chill the stomach and interfere with digestion.

All forms of starchy food should be avoided by persons who have intestinal indigestion, as they are half digested in the stomach and finished in the small intestine, on account of the small amount of intestinal juice and the large amount of saliva which is almost identical in composition. Breads and starches should be thoroughly masticated before swallowing.

### **French Lick Tonic**

A purely vegetable compound, will when taken after meals increase digestion and relieves constipation. If you cannot get it of your druggist, the author will send it to you by mail for fifty cents. One box will make one quart of liquid medicine.



## THE HANDS.

A delicate, well-kept hand is one of the chief points of beauty ; therefore, every woman who would add to her attractions should bestow careful attention to those details which affect not only her personal appearance, but reveal a refined and cultured mind. Wash the hands always in warm water, and do not be sparing with the soap and brush. If, in cold weather, your hands are liable to chap, keep a small pot of honey, and just before you dry your hands dip in a finger and rub well the hands round and round, give a slight rinse and dry carefully, dust a little oat meal on them and rub off with a dry towel.

To whiten and soften the hands the following are excellent :

**Almond Paste**—To make a good almond paste, obtain of sweet and bitter almonds each two ounces, pound to a paste and work up with one-half ounce Windsor soap cut in fine shreds ; to this add two drachms spermaceti, one-half ounce oil of almonds and twelve drops oil of bergamot. Subject to gentle heat, stir well and cool in china pots.

**To Soften the Hands**—1. To soften the hands, fill a wash-basin half full of fine sand and soap suds as hot as can be born. Wash the hands in this five minutes at a time, washing and rubbing them in the sand. The best is the flint sand, or the white, powdered quartz sold for filters. It may be used repeatedly by pouring the water away after each washing, and adding fresh to keep it from blowing about. Rinse in warm lather of fine soap, and, after drying, rub them with dry bran or cornmeal. Dust them and finish with rubbing cold cream well into the skin. This effectually removes the roughness caused by housework and should be used every day, first removing ink or vegetable stains with acid.

2. Soap is an indispensable article for cleansing hands, but it often leaves the skin rough, cracks on the hands come, and soap is often unpleasant. Use honey, rub it on when the skin is dry ; moisten a little, rub harder, use a little more water ; finally wash thoroughly and your hands will be as clean as though the strongest soap had been used and no cracks or roughness will annoy you.

3. Keep a dish of Indian meal on the toilet stand near the soap and rub the meal on the hands freely after soaping them for washing. It will surprise you, if you have not tried it, to find how it will cleanse and soften the hands and prevent chapping.

4. Before retiring take a large pair of gloves and spread mutton tallow or vaseline inside, also all over the hands. Wear the gloves all night and wash the hands with olive oil and white castile soap the next morning.

5. After cleansing the hands with soap, rub them well with oatmeal while still wet. Honey is also very good, used in the same way as lemon juice, well rubbed in at night.

**To Whiten the Hands**—Keep some oatmeal on the wash stand, and as often as the hands are washed rub a little oatmeal over them, then rinse it off and when dry put on a little bit of pomade, made as follows : Take



about five cents worth each of white wax, spermaceti and powdered camphor, and olive oil enough to make it the thickness of soap; put it in gallipot and let it stand in an oven to melt; mix it up, and when cool it will be found very good for the hands. Gloves worn either in the day or night will help keep the hands white.

2. A cake of brown Windsor soap scraped into thin flakes, and then mixed with a tablespoonful of eau de cologne, and a tablespoonful of lemon juice is said to make a useful preparation for this purpose. There is nothing injurious in the preparation. When the soap has been thoroughly blended with the lemon juice and eau de cologne it should be pressed into a mold, one made of card board in the form of a small box, the size of a cake of soap, will answer the purpose, and allowed to dry before it is used.

3. Half an ounce of white wax, half an ounce of spermaceti, quarter of an ounce of powdered camphor; mix them with as much olive oil as will form them into a very stiff paste, and use as often as you wash your hands.

4. Mixtures of two parts of glycerine, one part ammonia, and a little rose water whitens and softens the hands.

**Wash for Hands**—A mixture of honey, lemon juice and eau de cologne is exceedingly useful to whiten the hands when discolored by sun, wind or work, and may be kept mixed for the purpose in a small toilet jar. Take one wine glass of each ingredient and mix well; then pour into the jar and keep closely corked. This may be applied night or day, and the inside of the fingers rubbed with pumice stone.

**Cold Creams**—1. Heat together four parts olive oil and one part white wax until a uniform liquid mass is obtained, when a little color and any desired perfume may be added. The mixture may be allowed to cool, but must be stirred while cooling to prevent the separation of the wax. This preparation softens the skin and is nice for wounds and chapped hands.

2. The following makes a very good cream: Melt together one drachm white wax, one of spermaceti and two ounces of olive oil; add two ounces rose water and one-half ounce orange flower; rub together until they are thoroughly incorporated and the mixture is of the consistency of cream.

**The Nails**—Great attention should be paid to keeping the nails in good order. They should be brushed at least twice a day, and the skin around the lower part should be kept down by rubbing with a soft towel. The sides of the nails need clipping about once in a week. If they become stained wash them well with soap, and after rinsing off the soap wash them with lemon juice.

## FACE.

**Freckles**—1. Freckles are easily removed by the following treatment, but the directions must be followed regularly: Five grains corrosive sublimate, two ounces alcohol, four ounces water. Apply two or three times during the day. At night the following ointment: One ounce of white wax, one teacup of nice, white lard, or vaseline, lump of camphor the size of a chestnut, one teaspoonful of glycerine. Put the wax and camphor in a tin to melt, crumbling the camphor; when melted add the other ingredients.



Stir thoroughly and pour into moulds which have been dipped in water. This recipe will be found to remove pimples as well as tan and freckles.

2. A good lotion for the cure of freckles, tan or sunburned face or hands is thus made: Take half a pound of clear ox gall, half drachm each of camphor and burned alum, one drachm of borax, two ounces of rock salt, and the same of rock candy. This should be mixed and well shaken several times a day for three weeks until the gall becomes transparent; then strain it very carefully through filtering paper, which may be obtained from the druggist. Apply to the face during the day and wash off at night.

3. Wash in fresh buttermilk every morning and rinse the face in tepid water, then use a soft towel. Freckles may also be removed by applying to the face a solution of nitre and water. Another good wash for freckles is made by dissolving three grains of borax in five drachms each of rose water and orange flower water. There are many remedies for freckles, but there is none that will banish them entirely.

4. Take one ounce of lemon juice, a quarter of a drachm of powdered borax, and half a drachm of sugar. Mix and let them stand in a glass bottle for a few days, then rub it on the face and hands night and morning. Two tablespoonfuls of lemon juice will equal one ounce.

5. Rectified spirits of wine, one ounce; water eight ounces; half an ounce of orange flower water, or one ounce of rose water; diluted muriatic acid, a teaspoonful; mix. To be used after washing.

6. Take grated horseradish and put in very sour milk. Let it stand four hours, then wash the face night and morning.

**Cure for Sunburn and Freckles**—For sunburn or light freckles on face or hands, take one drachm hydrochinon, by weight; one-half drachm glacial phosphoric acid, two drachms glycerine and six ounces distilled water. This lotion may be prepared by any apothecary at a small cost and is reliable. It is to be applied morning and night, after thoroughly cleansing the skin.

**Face Wash**—Mix together ten cents worth each of bismuth, bay rum and rose water and one-half teaspoon glycerine.

**Oat Meal Wash**—To prepare oat meal for the complexion, put one pound meal in three pints cold water; let it stand twelve hours, then put it in a thin bag to drip. To the distilled liquid add one ounce glycerine and one gill alcohol. This is a delightful wash for the face and hands, making the skin soft as velvet.

**Balm of Beauty**—Equal parts of cocoanut oil, white wax and glycerine, with one drop of attar of roses, making a most delightful "balm of beauty," and is the most refreshing unguent for chapped hands and face. It will also smooth out the wrinkles if applied nightly during the winter.

**To Remove Wrinkles**—1. A secret way to take away wrinkles is to heat an iron shovel red hot, throw on it one spoon of myrrh in powder and smoke the face over it, covering person and shovel with a sheet to keep the fumes in. Repeat this three times, heat the shovel again and pour on it two teaspoons of white wine, steaming the face with it three times.

2. Take equal parts of glycerine and rosewater and a few drops of carbolic acid and rub the face every night.



**For the Bath**—As a dressing in the bath, take two quarts of water with two ounces glycerine, scented with rose, which will impart a final freshness and delicacy to the skin.

**Milk of Roses**—Drop by drop, add one ounce simple tincture benzoin to one quart of rose water, shaking all the time to avoid lumping. Then one drop at a time, add twenty or thirty drops tincture myrrh; mix well, bottle, cork, and bathe the face and neck with it once or twice a day.

**Pimples**—It requires self-denial to get rid of pimples, for persons troubled with them will persist in eating fat meats and other articles of food calculated to produce them. Avoid the use of rich gravies, or pastry, or anything of the kind in excess. Take all the outdoor exercise you can and never indulge in a late supper. Retire at a reasonable hour and rise early in the morning. Sulphur to purify the blood may be taken three times a week, a thimbleful in a glass of milk before breakfast. It takes some time for the sulphur to do its work, therefore, persevere in its use until the humors, or pimples, or blotches disappear. Avoid getting wet while taking the sulphur.

2. Try this receipt: Wash the face twice a day in warm water and rub dry with a coarse towel. Then with a soft towel rub in a lotion made of two ounces of white brandy, one ounce of cologne and one-half ounce of liquor potassa. Persons subject to skin eruptions should avoid very salt or fat food. A dose of Epsom salts occasionally might prove beneficial.

3. Wash the face in a dilution of carbolic acid, allowing one teaspoonful to a pint of water. This is an excellent purifying lotion and may be used on the most delicate skins. Be careful about letting this wash get into the eyes.

4. Oil of sweet almonds, one ounce; fluid potash, one drachm; shake well together and then add rose water, six ounces; mix. Rub the pimples or blotches for some time with a rough towel and then dab them with the lotion.

5. Dissolve one ounce of borax and sponge the face with it every night. When there are insects, rub on flour of sulphur, dry; after washing, rub well and wipe dry; use plenty of castile soap.

**Black Spots on the Face.**—The black spots on the face are not always what are called flesh worms. What are mistaken for them are produced in this way: The skin may be coarse, and the ducts, being large, collect the perspiration, which hardens and blackens and hence the common supposition of there being grubs or maggots in the skin. The remedy is simple. Clean the part affected by squeezing out the substance that is lodged, and then use a lotion of diluted spirits of wine several times a day, until the blotches have disappeared. If they are really flesh worms take something to purify your blood, sulphur or sarsaparilla.

**Moth Patches.**—It is said that the drinking of hard cider, two or three glasses per day will remove moth spots. At least so writes a correspondent who had tried it with success. While drinking the cider, let tea and coffee alone.

Moth patches may be removed from the face by the following remedy: Into a pint bottle of rum put a tablespoonful of flour of sulphur. Apply this to the patches once a day, and they will disappear in two or three weeks.

Bathe the face two or three times a day in borax water; a teaspoonful of powdered borax in a basin of warm water.



## CARE OF THE TEETH.

The teeth require to be kept particularly clean, rather than the application of mouth washes and elaborate dentrifices. The more simple the ingredients used, the better. Unless recommended by a good dentist, all tooth powders reputed to have beautifying effects should be used with caution. Washing the teeth night and morning is the best preservative of their beauty and soundness. If encrusted with tartar or other discoloring matter, have it removed by a dentist.

**Odontine**—There are several dentrifices advertised under this name, two or three of which have acquired a very large sale in the fashionable world. That of an eminent perfumery house appears to have the following composition: cuttle-fish bone, castile soap, and red coral, equal parts; color with tincture of cochineal and mix with honey sufficient to make a paste, and essential oils to aromatize a sufficient quantity of each.

**Sozodont**—Take of salts of tartar (carbonate of potassa) one-half ounce; honey, four ounces; alcohol, two ounces; water, ten ounces; oil of wintergreen and oil rose sufficient to flavor. An elegant dentrifice.

**Myrrh and Borax Mouth Wash**—Rub well together in a mortar, one ounce each of borax and honey; then gradually add one quart spirit of wine (not above proof) and add one ounce each of gum myrrh and red saunders wood. Macerate for fourteen days and filter. This is an excellent wash for the gums and mouth.

**Odor from Perspiration**—The unpleasant odor from perspiration is frequently the source of much vexation to persons who are subject to it. Nothing is simpler than to remove this odor. Put two tablespoons of spirits of ammonia (hartshorn) in a basin of water and wash. This leaves the skin fresh and clean. The wash is perfectly harmless and very cheap.

**The Gums**—For diseased and inflamed gums, two parts golden seal, one part powdered burnt alum, and two parts glycerine, made into a paste and rubbed on the gums and around the teeth at night, strengthens and restores the gums to health, provided no tartar is present to cause the disease, which must be removed first before applying.

**Lip Salve**—Dissolve one small lump of sugar in one tablespoon rose water (common water will do, but is not so good); mix it with two large spoons sweet oil, one piece spermaceti, the size of one-half butternut; simmer the whole well together eight or ten minutes, then turn into a small box.

## THE HAIR.

The hair should be washed frequently in pure water and rubbed dry with a soft towel and should be thoroughly combed and brushed. A small quantity of oil may be used if desired; olive oil is the simplest and best.

The eyebrows should be daily brushed in the artistic line of the brow, and a few drops of olive oil may occasionally applied with advantage.

The eyelashes should have their tips cut once a month and be washed daily in pure water. If subject to entanglement the offending hairs may be



clipped and trained away from each other. The eyelashes may also occasionally be touched with a little oil.

To the mustache and beard, all that has been said about washing, combing, brushing, cutting and occasional oiling applies with equal force.

**Hair Dressing**—One of the pleasantest and best of hair dressings can be made by the following recipes which forms the base of many of the most popular preparations in use:

Six ounces castor oil, pure and fresh, two ounces alcohol, 95 per cent., one drachm oil bergamot; mix and shake well. Bergamot is an exquisite and favorite perfume, but any fragrant oil, such as rosemary or lavender, may be substituted if preferred. The proportions of the recipe are excellent yet one may make the dressing less oily if liked, by omitting an ounce or two of oil.

**To Prevent Gray Hair**—To prevent premature grayness, the head should be well brushed night and morning with a brush hard enough to irritate the skin somewhat. The bristles should be far enough apart to brush through the hair as it were, rather than over.

**Baldness**—Dr. Wm. F. Hutchinson, in the *American Magazine*, says of the falling out of the hair:

Baldness is so widely spread and so universal among us that it is quite fashionable. Nevertheless, I shall give a couple of recipes for that form that is accompanied by falling of dandruff—what is known technically as seborrhea of the scalp. In nine out of ten of these cases, a cure is possible; that is, hair may be restored if sufficient patience is allotted with other treatment. Owing to the barber's failure to give him back his hair, a general impression exists that it is no use to try; once bald, always bald.

This is scarcely ever true of seborrhea, not one in fifty per cent. of cases from other causes; and whosoever will try these recipes will be convinced of their efficacy.

For a week at the outset of the treatment the scalp is to be thoroughly washed with a reliable tar soap, such as any apothecary sells, drying the hair thoroughly but not rinsing out the tar. If hair has vanished, let the lather dry upon the bare spots. Then begin with a wash composed of one drachm of pure resorcin, one-half ounce castor oil, and seven and one-half ounces of bay rum; mix.

This is to be applied morning and evening and well rubbed in. After two weeks of this lotion have the following pomade prepared and rub into the scalp and hair a portion the size of a hazelnut every morning: Ten grains salicylic acid, five grains ammoniated mercury, and one ounce cold cream.

After one week's careful attention to this treatment the bald spots will be covered with fine, thick, silky growth that is a forerunner to a crop worth having.

**Wash to Darken the Hair**—Take of rust of iron, 2 drachms avoirdupois; old ale (strongest), 1 imperial pint; oil of rosemary, 12 to 15 drops; put them in a bottle, very loosely cork it, agitate it daily for 10 or 12 days, and then after repose decant the clear portion for use.

**Wash for Dry Stubborn Hair**.—The best and most effective of these



consists of 1 ½ ounces avoirdupois glycerine dissolved in 1 imperial pint of any fragrant distilled water, as that of roses or orange or elder flowers; 15 to 20 grains salt of tartar (carbonate of potassa) per pint is sometimes added.

**Wash to Cleanse the Hair and Scalp.**—1 teaspoonful powdered borax; 1 table-spoonful spirits of hartshorn; 1 quart soft water. Mix all together and apply to the head with a sponge, then rub the head with a dry towel. Use once a week.

Another excellent method of cleansing the hair, is to take the yolk of an egg, and rub it in thoroughly a little at a time. It will produce a slight soapy lather, which should be rinsed out with soft water. This leaves the scalp perfectly clean and the hair soft and silky.

**Blonde or Flaxen Hair.**—Mix in 10 ounces of distilled water 1 ounce acetate of iron, 1 ounce nitrate of silver, and 2 ounces nitrate of bismuth, moisten the hair with this mixture, and, after an hour, touch it with a mixture of equal parts of sulphide of potassium and distilled water.

**Blonde Hair Dye.**—Another method is by moistening the hair with a mixture of 2 ounces protochloride of tin and 3 ounces hydrated lime. An hour after using, use the potassium solution as in last receipt.

**Golden Yellow Hair Dye.**—A solution of bichloride of tin, sufficiently diluted followed by a mordant of hydrosulphuret of ammonia, gives a rich golden yellow tint to very light hair, and a golden brown to darker hair, owing to the formation of bisulphuret of tin.

**Red Hair Dye.**—A strong infusion of safflows, or a solution of pure rouge, in a weak solution of crystalized carbonate of soda, gives a bright red like henna, or a reddish yellow, according to its strength, if followed when dry by a mordant of lemon juice or vinegar diluted with one-half to an equal bulk of water.

**Rich Yellow Hair Dye**—A solution of acetate or nitrate of lead followed by a mordant of yellow chromate of potash, gives a brilliant rich golden yellow. If wanted warmer or deeper toned, a few drops of solution of diacetate of lead (Goulard's extract) should be added to the acetate solution.

A solution of pure annatto obtained by boiling it in water slightly alkalized with carbonate of soda, or with salts of tartar, gives a golden yellow or flame yellow, according to its strength, to very pale hair, and corresponding tones to darker hair. A previous mordant of alum water deepens it, and a subsequent washing with water soured with lemon juice or vinegar reddens it or turns it on the orange.

**Brilliant Yellow Hair Dye**—A solution of a neutral salt of iron (sulphate acetate, or chloride) followed by a weak solution of carbonate of soda, or salt of tartar, or lime water, gives a warm yellow or nankeen color, which, when deep turns on the red. In the latter case it is apt to assume a sandy shade on very light hair.

**Brown Hair Dye**—A ready way to color the hair brown is by a solution of permanganate of potassa in the proportion of one troy ounce to one quart of water. The hair must first be cleansed with a dilute solution of



ammonia, when it is dried by means of a towel, and the solution of the permanganate applied to the hair, but not to the skin, as this would also be colored. It dyes the hair immediately, and the desired shade may be obtained by applying more or less of the solution. Should the hands become stained with it, they can be cleansed with a little hydrochloric acid. This dye is not permanent, but is very easily renewed with a tooth brush.

**Golden Brown Hair Dye**—Brown hair may have a golden tone imparted to it by the judicious application of any of the yellow dyes already noticed. Light hair may be previously dyed of a warm light brown before applying the latter. A solution of copper (blue vitriol) followed by a solution of ferrocyanide of potassium, gives an extremely rich golden brown or bronze brown to light brown, when the process is expertly managed.

**Cautions About Applying Hair Dyes**—The application of the above dyes, so as to produce appropriate and agreeable shades, requires more consideration and experience than that of the black dyes. The complexion and the natural color of the hair of the person operated on, with other attendant circumstances, must be carefully considered beforehand, and allowed for. Unless all these points be attended to, the party may, on looking in the mirror, suddenly find himself strangely altered in appearance, and probably for the worse. Hair dyes of all kinds will act effectively and satisfactorily on perfectly clean hair. The presence of the slightest contamination of oily or greasy matter will arrest or greatly lessen their action, and render it unequal in different parts. Hence, the hair, in all cases, should be first thoroughly washed with soap and water, then rinsed with tepid water, and lastly wiped dry previous to their application. A few grains of soda or salt of tartar (carbonate of potassa) added to the first water, will facilitate its detergent action.

**To Bleach the Hair**.—It has been found in the case of bleaching the hair that gaseous chlorine is the most effectual. The hair should be cleansed for this purpose, by a warm solution of soda, and washed afterwards with water. While moist it is put into a jar and chlorine gas introduced, until the air in the jar looks greenish. Allow it to stand for twenty-four hours, and if necessary repeat the operation. The employment of binoxide of hydrogen has been recommended for this purpose, it being in every way superior to the other agents, but it has the drawback of being difficult to prepare.

**Lotion to Change Color of Hair**.—A number of lotions are extensively advertised, and sold under the name of "Hair restorers," "Hair rejuvenators," "Life for the hair," etc., which purport to restore the color and improve the growth of the hair. In the majority of cases, probably, a moderate use of such a lotion would be unattended with mischief; but it is worth remembering that paralysis and insanity have been known to be produced by the long continued use of cosmetics containing lead. The following receipts show how these restorers are made:

**Hair Coloring Which is Not a Dye**.—Take one drachm lac sulphur; sugar of lead, 2 scruples; glycerine, 2 ounces; distilled water, 6 ounces; mix and perfume to fancy. Or, lac sulphur and sugar of lead, each 1 drachm; sulphate of iron (copperas), 10 grains; glycerine, 2 ounces; water, 62 ounces;



mix and perfume. Shake well before using, and apply with a sponge every other day until a change of color is obtained, after which one application each week will be sufficient. The hair must be cleansed of all greasy matter before using the above.

**Superfluous Hair**—No drugs of any kind should be used to remove these; such remedies while destroying the hair root, must of necessity injure the skin. The proper method is to pull each hair from its sheath by means of a pair of tweezers, and apply afterward a little carbonate of bismuth moistened with glycerine. They will not grow again if the operation be performed properly.

**Depilatories**—Preparations for removing superfluous hair from the skin. The constituents of most of these are lime and the tersulphuret of arsenic (orpiment), but the use of orpiment is dangerous, especially in any case of abrasion of the skin. The safest depilatory is a strong solution of sulphuret of barium made into a paste with powdered starch. It should be applied immediately after it is mixed, and allowed to remain there for five or ten minutes.

**Martin's Depilatory**—Apply a light coating of sulphuretted sulphide of calcium to the part from which the hair is to be removed; after ten minutes it may be washed off and the skin will be clean.

**Boudet's Depilatory**—Mix three parts hydro-sulphuret of sodium (crystalized), ten parts finely powdered quicklime, and eleven parts of starch. It should not be applied longer than from two to four minutes. Very effective and safe.

**Chinese Depilatory**—Mix eight ounces quicklime, one ounce dry pearlash, and one ounce sulphuret of potassium; apply as in last receipt.

**To Apply a Depilatory as a Plaster**—Another mode of application is to make the paste rather thick, spread it on a piece of strong paper and apply it like a plaster. In from five to ten or fifteen minutes, or sooner if much smarting occurs; the paste should be washed off with warm water, and a little cold cream or any simple ointment applied to the part. The liquid depilatories are usually thickened with a little starch powder before application.

**To Apply a Depilatory as a Paste**—In use, the chemical depilatories which are in the state of powder are made into a paste with warm water, and immediately applied to the part previously shaved close, a little starch being added to those which do not contain it, in order to render the paste more manageable. Sometimes soap lye is used instead of water to form the paste. A wooden or bone knife should be used in preparing this paste.

**Cautions About Applying Depilatories**—Both classes require caution in their use. They should be applied to only a small surface at a time to prevent them from extending to the adjacent parts. They lose their properties unless kept entirely excluded from air; and no liquid must be added to the dry ones until just before their application and then no more should be mixed than is required for immediate use.



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TO THOSE AFFLICTED WITH

# CANCER

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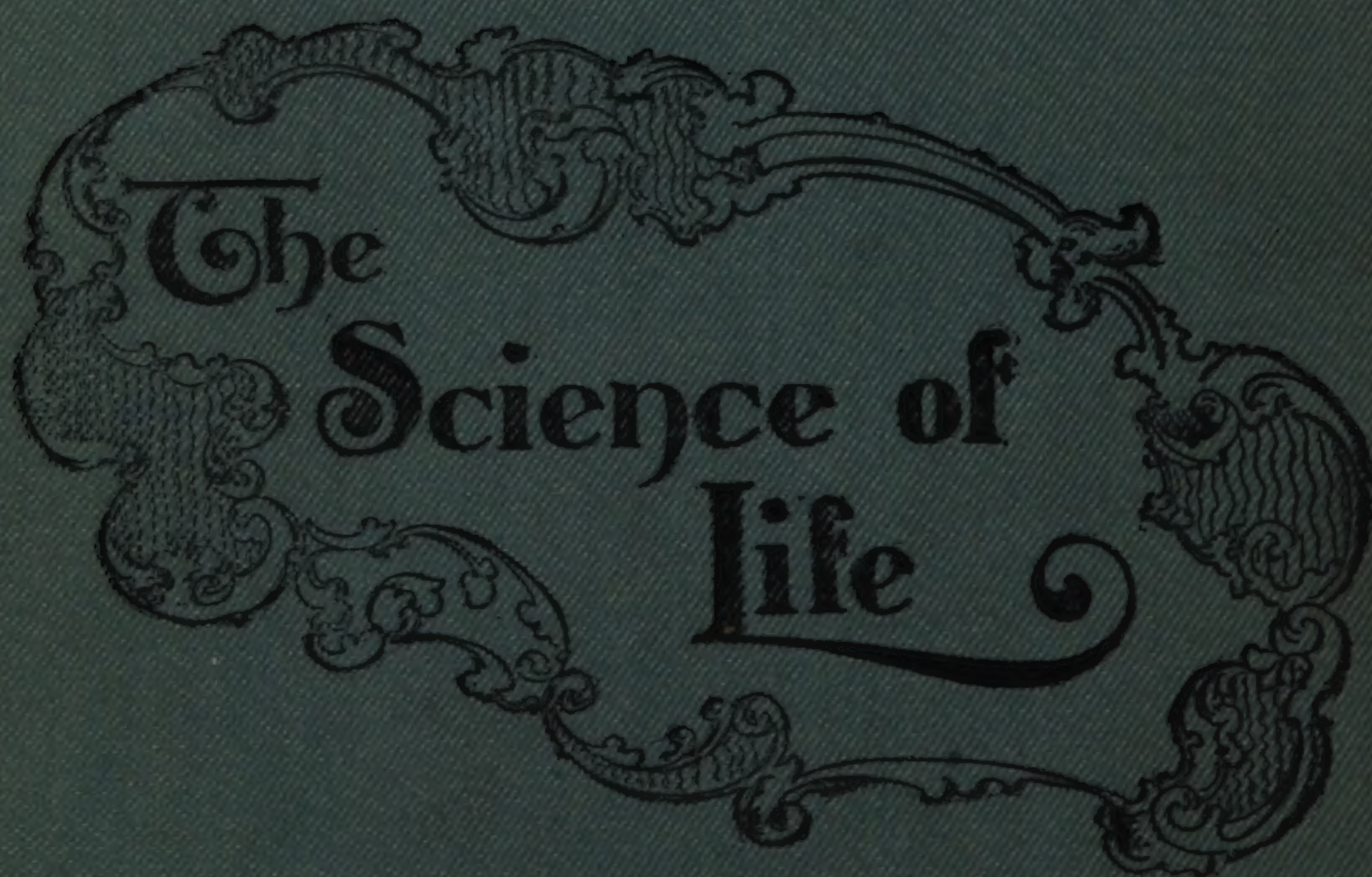




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